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human.

REFERENCE AUTHORS

JOURNAL TITLE

COMMENT

ACCESSION VERSION KEYWORDS SOURCE

LOCUS DEFINITION

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Query Match Best Local Si Matches 411;

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BASE COUNT ORIGIN

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Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D., Fitzgerald, L.M., Fitzhugh, W.M., Fritchman, J.L., Geoghagen, N.S., Glodek, A., Gnehm, C.L., Hanna, M.C., Hadblom, E., Hinkle, P.S.Jr., Kelley, J.M., Mcrley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M., Moreno-Palanques, R.F., McDonald, L.A., Nuyven, D.T., Pelligrino, S.M., Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shriey, R., Bednarlik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J., Bednarlik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J., Dinke, D., Feng, D.-F., Ferrie, A., Fischer, C., Hastings, G.A., He, W.W., Hu, J.S., Greene, J.M., Gruber, J., Hudson, P., Kim, A.K., Kozak, D.L., Wel, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M., Dillion, P.J., Fannon, M.R., Rosen, C.A., Haseltine, W.A., Fields, C., Fraser, C.M. and
                                                                                                                                                                                                                                                                     Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of cDNA sequence Nature 377 (6547 Suppl), 3-174 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: arkerlavetigr.org
For clone availability, additional sequence and expression
information this EST, please check the TIGR Huma
Index (http://www.tigr.org/tdb/hgi/hgi.html)
Seq primer: M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563 attggacatcaccacaaggaaatcgggaaactaaaattcaagatatggactgtgtatatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ATTGGATATCACCACAAGGAATTCCAGAAACTAAAAGTTCAGGATATGGATATGCGTATATT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The Institute for Genomic Research
9712 Medical Center Drive, Rockville, MD 20850
Tel: 3018699056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="ATCC (inhost):178283"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cell_type="fibroblast"
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/dev_stage="fetal"
/note="Organ: lung; Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
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Contact: Kerlavage, AR
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86.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 365).
Adams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A., Bult, C.J., Lee, N.H.; Kirkness, E.F., Weinstock, K.G., Gocayne, J.D., White, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C., Clayton, R.A.,
                                                                                                                                                                                                                                                                     4;
                                                                /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Robin Humphreys, NIH"
                                                                                                                                                                                                                                                                                                                                                                           gacctgtgataattgcctatgataattcatttcttgagaaaccatattattgagtggaaa 158
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                                                                                                                                                                                                                                  Length 649;
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                                                                                                                                                                                                                                  DB 10;
                                                                                                                                                                                                                              Score 271.2; DB 10;
Pred. No. 2.2e-37;
0; Mismatches 133;
                                                                                                                                                           198
                             /lab_host="DH10B"
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                  /t1
/dev_stage="7
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illarity 72.9%;
Conservative
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VERSION KEYWÖRDS SOURCE ACCESSION

ORGANISM

REFERENCE AUTHORS

DEFINITION

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000	0 m 5	25 25 27 27	28 42.4 30 42.4 31 42.4 31 42.4	7 W 4 I	0 0 6	800	044	42 40.6 43 40.6 C 44 40.6 C 45 40.6	RESULT 1 AL525497 LOCUS DEFINITION AL525-	ACCESSION AL525- VERSION AL525- KEYWORDS EST. SOURCE human ORGANISM HOMO: REFERENCE I (b) REFERENCE I (b)		Email FEATURES	BASE COUNT 2
14.5 Compugen Ltd.		<pre>2: Search time 4150.53 Seconds (without alignments) 2016.155 Million cell updates/sec</pre>	caagatatggactgtgtata 620		residues	leters: 27472414					results predicted by chance to have a 1 to the score of the result being printed, of the total score distribution.		AL52497 AL525497 AL52497 BG778615 602668073 BG72803 602690866 B1828403 601091625 BF443846 261485 MA BF443846 261485 MA BF44384 261483 MA R52759 Y999f10. r1 AL562913 AL562513 B14562913 AL562513 B14562913 B1456292 BE619361 601473366 AL109318 Drosophil AAC63921 Drosophil AAC63955 ENTTR72TR AL65391 Drosophil
GenCore version 4.5 Copyright (c) 1993 - 2000 Com	nucleic search, using sw model	September 23, 2002, 10:52:12	US-09-828-995B-54 620 1 ggcacgaggctgagtttgtg	IDENTITY_NUC Gapop 10.0 , Gapext 1.0	13736207 seqs, 6748477542 re	hits satisfying chosen parameters	length: 0 length: 2000000000	Minimum Match 0% Maximum Match 100% Listing first 45 summaries	EST:* 11: em_estba:* 2: em_estbum:* 4: em_estin:* 5: em_estin:* 6: em_estpu:* 6: em_estpl:* 7: em_estpl:*	0. 9b esti:* 10. 9b_esti:* 11. 9b_hc:* 11. 9b_hc:* 11. 9b_ss:* 13. en_gss_hum:* 14. en_gss_hum:* 15. en_gss_pin:*	the number of than or equa d by analysis	SUMMARIES OUGEY MATCH DO IN	100 100 100 110 110 110 110
	OM nucleic - nuc	Run on:	Title: Perfect score: Sequence:	Scoring table:	Searched:	Total number of	Minimum DB seq Maximum DB seq	Post-processing:	Database :		Pred. No. score gree and is de	,	1

c 18	4	•	1001	175	CNS0064G	AL062781 Drosophil
13	43.2	•	791	12	AQ865293	-
c 20	43	•	641	12	AZ523481	AZ523481 219PbH07
21	43		645	12	AZ522162	AZ522162 203PbB01
22			704	10	BM163666	
			879	12	AZ678808	AZ678808 ENTLC48TF
c 24	42.6		579	12	CNSOOFZO	_
25	42.6		639	12	CNS017QD	AL108367 Drosophil
56	42.6	•	903	12	CNS0011C	
c 27	42.4	•	481	σ	AW305472	AW305472 fj64c01.x
28	42.4		513	σ	AL516344	AL516344 AL516344
29	42.4	•	549	12	CNS0248Y	
30	42.4		677	12	B89641	B89641 CIT-HSP-216
	42.4	•	1013	6	AL564621	AL564621 AL564621
	42.2	•	928	10	BF274633	BF274633 GA_ED002
	42.2		1025	12	CNS014J2	
	42		984	12	CNS01POS	
35	41.8		438	12	AQ192259	
	41.8	•	928	12	CNS06DH6	. AL393808 T7 end of
c 37	41.4		1223	12	B12981	B12981 T24D11-Sp6
38	41.2	9.9	982	12	CNS006BE	AL064041 Drosophil
c 39	41		461	12	B67180	B67180 CpG0006A Cp
40	41	•	806	12	BH138952	BH138952 ENTOS93TR
41	40.8	•	390	12	AQ125679	
42	40.8	•	1101	12	CNS000NX	
43	40.6	٠	812	12	CNS00IDC	
c 44	40.6	6.5	928	12	CNSOODKY	-
	40.6		966	12	A2680790	AZ680790 ENTHD81TF
					ALIGNMENTS	
RESULT 1	7					
LOCUS DEFINITION		5497 5497 L	AL525497 AL525497 LTI NFL003 NBC3	03 1	954 bp mRNA Homo sapiens cDNA	linear EST 13-FEB-2001 clone CSODC012YF21 5
	prim	prime, mRNA	A sequence	nce.		
ACCESSION	AL52549	5497		0		
VERSTON	AL52549/	549/.I	. GI:IZ/88990	188/	0.61	
NEI WORDS	EST.	•				
SOURCE		numan. Tomo ganiono	5			

AL525497 954 bp mRNA linear EST 13-FEB-2001 AL525497 LTI_NFL003_NBC3 Homo sapiens cDNA clone CSODC012YF21 5 Prime, mRNA sequence. AL525497 AL525497 BEST. EST.	Homo sapiens Enkaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Enkaryota, Metazoa; Chordata; Catarrhini; Hominidae; Homo. 1 (bases 1 to 954) Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001) Contact; Genoscope	60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	/note="Corgan: brain; Vector: pCWNSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCWNSPORT 6 vector. Library was constructed by Life Technologies. Contact : Feng Library was constructed by Life Technologies. Contact : Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax : (1) 301 610 8371 Email : filang@lifetech.com URL : http://fulllength.invitrogen.com" 1 others
RESULT 1 AL525497 LOCUS DEFINITION ACCESSION VERSION KEYWORDS	ORGANISM REFERENCE AUTHORS TITLE JOURNAL COMMENT	FEATURES	BASE COUNT

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Indels

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/lab_host="bhild" (T1 phage=resistant)"
//ab_host="bhild" (T1 phage=resistant)"
//ab_host="bhild" (T1 phage=resistant)"
//ab_host="bhild" (T1 phage=resistant)"
//ab_host="crander" (T1 phage=resistant)
//ab_host="crander" (T2 phage=resistant)
//ab_host="crander" (Apresperdergerger)
//adaptors were used in cloning as follows: 5'
adaptors were used in cloning as follows: 5'
adaptor sequence: 5'-CACGGCCATAMGGC-3' and 3' adaptor
sequence: 5'-ATTCTAGGCCAGGCGGCGCATG-GT(30)BN-3'
(where B = A, C, or G and N = A, C, G, or T). Average
insert size 1.5 kb (range 0 9-4.0 kb). 14/15 colonies
contained inserts by PCR. This library was enriched for
full-length clones and was constructed by clontech
Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG723203 743 bp mRNA linear EST 08-MAY-2001 602690806F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:4823185 5',
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Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 CCTTTCTGATAAGCACAACATTTGGCTGTACTTCATCTTCAGACACCGAGATAAAAGTTA 123
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ccctgcttgtttgcacagcatttggct---ctatgctttcaaatgctgagataaaagtta
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                                                                                                                                                                                                                                                                                       140 g
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Mammalia; Eutheria;
1 (bases 1 to 743)
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124 c
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

El (Abasea It o6 683)

NIH-MOC http://mgc.nol.nlh.gov/.

L Onpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov
Tissue Procurement: DYTD/DTP

CDNA Library Preparation: CLONETECH Laboratories, Inc.

CDNA Library Preparation: CLONETECH Laboratories, Inc.

CDNA Library Preparation: CLONETECH Laboratories (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://mage.llnl.gov
Plate: LLCM1659 row: b column: 20

High quality sequence stops: 683.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              683 bp mRNA linear EST 15-MAY-2001
602668073F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:4807603 5',
mRNA sequence.
BG778615
BG778615.1 GI:14048932
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                                                                                            ÷
                                                 Length
                                                                                            Indels
                                                                                        73;
                                                 DB 9;
                                             Score 341.2; DB 9
Pred. No. 1.5e-67;
                                                                                        0; Mismatches
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/db_xrefu"taxon:9606"
/clone="IMAGE:4807603"
/clone_lib="NIH_MGC_60"
                                             55.0%;
84.0%;
                                                                                          Matches 398; Conservative
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LOCUS DEFINITION

RESULT BG778615

ACCESSION

/ERSION

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KEYWORDS SOURCE ORGANISM

AUTHORS TITLE JOURNAL COMMENT

FEATURES

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); Oligo-dT primed using primer 5'-TTTTTTTTTTTTTTTTTVN-3',

state-selected for average insert size 2: Kb and

normalized to ROT 5. This is a primary library enriched

for full-length clones and constructed using the

Cap-trapper method (Carninci, in preparation). Library

constructed by M. Brownstein (NIMH/NHGRI, National

Institutes of Health). Note: this is a NIH_MGC Library."
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                                                                                                                                                                                                                                                               /note="Organ: testis; Vector: pBluescriptR (modified
Tissue Procurement: Miklos Palkovits, M.D., Ph.D. CDNA Library Preparation: Michael J. Brownstein (NHGRI), Sh Toshiyuki and Piero Carninci (RIKEN) CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          408 ACCATGGCAATGCACAAATGGATCAGAAGTTCAAAGTTCCTGGGCAGAAACTACTTATNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 743;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 328.2; DB 10; Length
Pred. No. 1.4e-64;
); Mismatches 74; Indels
                                                                                                                                                                 1. 743
/organism="Homo sapiens"
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/clone_lib="NIH_MGC_97"
/lab_host="DH10B"
                                                                                                                                     High quality sequence stop: 730.
Location/Qualifiers
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83.5%;
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BI828427 603078385F1 NIH_MGC_119 Homo sapiens cDNA clone IMAGE:5170268 5', MRNA sequence.
BI828427

DEFINITION

BI828427

ACCESSION

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/note="Organ: brain; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: EcoRV (destroyed); RNA Source normal medialla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon directionally cloned (EcoRV site is destroyed upon oloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013, Note: this is a NIHMGC Library."
                                                                                      Euteleostomi;
                                                                                                                                                                                                                                  Email: cgapbs-remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The IN.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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                                                             Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoston Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo. 1 (bases 1 to 658) NIH-MGC http://mgc.nci.nih.gov/. NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           164 aagtattgaatcttggaggaatggctttcattcatttggatgtcggattcctctataccc 223
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                                                                                                                                                                                                                                                                                                                                                                 found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM11423 row: i column: 21
High quality sequence stop: 651.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 323.2; DB 10;
Pred. No. 1.9e-63;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
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/clone=lib="NIH_MGC_119"
/tissue_type="medulia"
/lab_host="DH108"
                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BI828427.1 GI:15939977
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                                                                                                                                                                   TITLE
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VERSION
KEYWORDS
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us-09-828-995b-54.rst

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Matches 293; Conservative
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 649)

8 NIH-MGC http://mgc.ncl.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov

Tissue procurement: Lothar Hennighausen Ph.D., Robin Humphreys

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM6522 row: a column: 08

High quality sequence stop: 513.

1 649
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/organism="Mus musculus"
/strain="C57766"
/db_xref="taxon:10090"
/clone="lib="KOI_CGAP_Man5"
/clone="lib="KOI_CGAP_Man5"
/clone="lib="KOI_CGAP_Man5"
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/tissue="type="tumor, gross tissue"
/tasue="type="tumor, gross tissue"
/lab_host="Type="tumor, gross tissue"
/lab_host="tumor, gross tissue"

                                                                                                                                                                                                       BE289033 649 bp mRNA linear EST 26-OCT-2000 601091625F1 NCI_CGAP_Mam5 Mus musculus cDNA clone IMAGE:3486223 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              taccetgettgtttgcacagcatttggctctatgctttcaaatgctgagataaaagttaa 278
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        171 TITCATICITCTICTACAATAACIGGCTAI------TCTTIGGAGATAAAAGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.7%; Score 271.2; DB 10; Length 72.9%; Pred. No. 1.2e-51; Live 0; Mismatches 133; Indels
198
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Matches 411; Conservative
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Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
and -minmatch 12 options.
PORR PRimers
FORWARD: AGGARACAGCCAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Design and use of two pooled tissue normalized cDNA libraries for EST discovery in swine Unpublished (2000)
Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
De Dox 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus. 1 (bases 1 to 476) Fahrenkrug, S.C., Freking, B.A., Rohrer, G.A., Smith, T.P.L., Casas, E Stone, R.T., Heaton, M.P., Grosse, W.M., Bennett, G.A., Laegreid, W.W. and Keele, J.W.
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                       281
                                                                                                   458
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                                                                                                                                                                                                                                                                          518
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                                                                                                                                                                                                                                                                                                                                                                              577
                                                                                                                                                                                                                                                                                                                                                                                                      462 TACCACTGGACTCAGAAGTACCAAGTCCATGGATCGAAGCTTCTTATGGGACTCTCCGAT 521
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399 ccgaaacattgatagtgaaaactggaagaccatcattaccaagaatctacattacaaaga
                                                                                                                                                                                                    459 tgggtttgatcttaacaaaggtattgaagcaaagataaacacacttctgccagcacatg
                                                                                                                                                                                                                                                                                                     gcaacctccattatttccggataattttaaggaatgcacaatagaatatgaattaaaata
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BF443846 476 bp mRNA linear 261185 MARC 2PIG Sus scrofa cDNA 5', mRNA sequence. BF443846
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1. 476
/organism="Sus scrofa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9823"
/clone_lib="MARC 2PIG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BACKWARD: GTTTTCCCAGTCACGACG
Plate: 95 row: O column: 6
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              522 GAAGGAGTTTGGAAACTCAATTCC 545
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Gaps

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

(bases 1 to 473)

Hillier,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B.,

Chissoe,S., Dietrich,N., Dubuque,T., Favello,A., Glash,W., Hawkins
,B., Morris,M., Parsons,J., Prange,C., Rifkin,L., Rohlfing,T.,

Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J., Trevaskis,E.,

Underwood,K., Wohldmann,P., Waterston,R., Wilson,R. and Marra,M.

Generation and analysis of 280,000 human expressed sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         K52795
yg99f10.rl Soares infant brain INIB Homo sapiens cDNA clone
IMAGE:41648 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@Astson.wustl.edu
Insert Size: 1454
High quality sequence stops: 372 Source: IMAGE Consortium, LLNL
High quality sequence royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 1454 Std Error: 0.00
                                                                                                                                                                                                                           ggaaacticaaagtatigaatctiggaggaatggctiicaticattiggatgicggatic 213
                                                                                  214 ctctataccctgcttgtttgcacagcatttggctcta---tgctttcaaatgctgagata 270
                                                                                                                                                                                                                                                                                                            ttgcaatggcaacctccattatttccggataattttaaggaatgcacaatagaatatgaa 390
                                                                                                                                                                                                                                                                                                                                                  236 TIGCAGTGGCAACCTCCACTGTCTCTGGATAATTTTAAGGAATGCACAGTAGAGTATGAA 295
                                                                                                                                                                   /clone="IMAGE:41648"
/clone_lib="Soares infant brain lNIB"
/sex="female"
/dev_stage="73 days post natal"
/lab_host="DH10B (ampicillin resistant)"
                         Indels
Pred. No. 2.2e-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="GDB:414189"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seq primer: M13RP1
High quality sequence stop: 372.
Location/Qualifiers
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    89.5%;
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R52795.1 GI:814697
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                     Matches 290; Conservative
  Best Local Similarity
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 01-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Casas, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.

1 (bases 1 to 379)

Brhrenkrug, S.C., Freking, B.A., Rohrer, G.A., Smith, T.P.L., Casas, E. Stone, R.T., Heaton, M.P., Grosse, W.M., Bennett, G.A., Laegreid, W.W. and Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Design and use of two pooled tissue normalized cDNA libraries for EST discovery in swine Unpublished (2000)
Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from testis, ovary, endometrium, hypothalamus, pituitary, and placenta." 69 g 125 t
                   388 gaditdaadtadcgdaacattgatagtgaadactggaagaccatcattacdaagaatcta 447
                                                                                                                                                                                                                                                                                                                                                                       328 tctttgcaatggcaacctccattatttccggataattttaaggaatgcacaatagaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40.0%; Score 248; DB 10; Length 379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pr443844 379 bp mRNA linear
261483 MARC 2PIG Sus scrofa cDNA 5', mRNA sequence.
BF443844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
TTE1: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="MARC_2PIG"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Sus scrofa"
/db_xref="taxon:9823"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTCCCAGTCACGACG
Plate: 95 row: 0 column: 4
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      448 cattacaaagatgggtttgatcttaac 474
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Sus

ORGANISM

KEYWORDS

VERSION

REFERENCE AUTHORS JOURNAL

COMMENT

TITLE

DEFINITION ACCESSION

BF443844 LOCUS

RESULT

450

Query Match

BASE COUNT ORIGIN

FEATURES

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mRNA sequence.
BI462644
                                                                                                                                                                                              Local Similarity
                                                                                                                       265
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//tissue_type="neuroblastoma cells"
/lab_host="DH10B"
/note="Organ: brain; Vector: pCMVSPORT 6; lst strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                                     gataaaagttaatcctcctcaggattttgagatagtggaccctggatatttaggttatct 326
                                                                                                                                                                                                                                                                                                                                                                                    213 GATAAAAGTTAACCCTCCTCAGGATTTTGAGATAGTGGATCCCGGATACTTAGGTTATCT 272
                                                                                                                                                                                                                                                                                                                                                                                                                               ctctttgcaatggcaacctccattatttccggataattttaaggaatgcacaatagaata 386
                                                                                                                                                                                                                                                                                                                                                                                                                                              93 GAGAGGCAATATCAAGGTTTTAAATCTCGGAGAAATGGCTTTCGTTTGCTTTGGCTATCGG 152
                                                                                                                                                                                                                                                                                                              attoctotataccotgottgtttgcacagoatttggct---ctatgcttcaaatgctga 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tgaattaaaataccgaaacattgatagtgaaaactgg--aagaccatcattaccaagaat 444
                                                                                                                                                                                                                        Gaps
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BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Eutele
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                        5;
                                                                                                                                                                                             Length 473;
                                                                                                                                                                                          Score 192.4; DB 10; Length
Pred. No. 9.9e-34;
0; Mismatches 56; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Verte
Mammalla; Eutheria; Primates; Catarrhini; Hon
1 (bases 1 to 928)
Li,W.B.; Gruber,C.; Jessee,J. and Polayes,D.
Lil-length CDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib "LTI_NFL003_NBC3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organisme"Homo sapiens"
/db_xref="taxon:9606"
/clone="CSODC012YF21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prime, mRNA sequence.
AL562513
AL562513.1 GI:12911007
                                                                                                                                                                                           31.0%;
80.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Genoscope
                                                                                                                                                                                                         Best Local Similarity 80.4 Matches 251; Conservative
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KEYWORDS
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Inumeur Inumeur Is Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota: Metazoa; Chordata; Catarrhini; Hominidae; Homo.

CE 1 (bases 1 to 904)

RS NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

(AL Onpublished (1999)

(AL Inqualished (1999)

(Contect: Robert Strausberg, Ph.D.

Email: Gapbs.remail.nih.gov

Tissue Procurement: Miklos Palkovits, M.D., Ph.D.

CDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

Clone distribution: MGC clone distribution information can be thep://inage.linl.gov

Plate: LLAMIST'8 row: i column: 18

High quality sequence stop: 477.
enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was constructed by Life Technologies. Contact: Feng Liang Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 8371 Email: filangelifetech.com URL: http://fulllength.invitrogen.com"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Organ: testis; Vector: pBluescriptR (modified pBluescript KS+); Site_1: BamHI; Site_2: Sall *NboI (gtcgap); Oligo-dr primed using primer 5' TTTTTTTTTTTTTTVN-3', Size-selected for average insert size 2.2 kb and normalized to ROT 5. This is a primary library enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BI462644 904 bp mRNA linear EST 21-AUG-2001 603203069F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:5268953 5',
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             382 gaatatgaattaaaataccgaaacattgatagtgaaaactggaagaccatcattaccaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cttctgccagcacaatgcacaaatggatcagaagttagaagttcatgggcagaaactact
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                                                                                                                                                                                                                                                                                                                                                                                                                                        31;
                                                                                                                                                                                                                                                                                                                                                                            DB 9;
                                                                                                                                                                                                                                                                                                                                                                        Score 188.6; DB 9
Pred. No. 7.6e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Mismatches
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/organisme"Homo sapiens"
/db_xrefe"taxon:9606"
/clone="IMAGE:5268953"
/clone_lib="NIH_MGC_97"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host="DH10B"
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86.28;
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ыс/вибэз 715 bp mRNA linear EST 20-OCT-2000 6014/5992F1 NIH_MGC_68 Homo sapiens CDNA clone IMAGE:3878831 5', mRNA sequence.
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for full-length clones and constructed using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                  266
                                                                                                                                                                                                                              206
                                                                                                                                                                                                                                                                                                                         382
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                                                                                                                                                                                                                                                                                                                                                                           383 aatatgaattaaaataccgaaacattgata---gtgaaaactggaagaccatcattacca 439
                                                                                                                                                                                                                                                                                                                                                                                                     326
                                                                                                                                                                                                                                                                                                                                                                                                                                             gataaaagttaatcctcctcaggattttgagatagtggaccctggatatttaggttatct 326
                                                                                                                                                                                                                                                                                                                                                                                                                               agaatctacattacaaagatgggtttgatcttaacaaagg---tattgaagcaaagataa 496
                                                                                                                                                                                       86
                                                                                                                                   14; Gaps
                                                                                                                                                            27 GAGAGGCAATATCAAGGTTTTAAATCTCGGAGAAATGGCTTTCGTTTGCTTGGCTATCGG
                                                                                                                                                                                                                                                                                                                                       210 attoctotatacoctgottgtttgcacagcatttggct---ctatgctttcaaatgctga
                                                                                                                                                                                                                                                                                   ctctttgcaatggcaacctccattatttccggataa--ttttaaggaatgcacaatag--
                                                                                                           Length 904;
                                                                                                         Score 188.2; DB 10; Length
Pred. No. 9.4e-33;
0; Mismatches 73; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acac-acttctgccagcacaatgcacaaatgga 528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
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                                                                                                          30.4%;
77.9%;
                                                                                                                                    Matches 306; Conservative
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                                                                                                          Query Match
Best Local Similarity
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TITLE
JOURNAL
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/tissue_type="large_cell carcinoma"
/tissue_type="large_cell carcinoma"
/tab_host="DH10B (phage-resistant)"
/note="Organ: lung; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Parkerage insert size 1.8 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="liMAGE:3876064"
/clone=lib="NHH_MGC_68"
/tissue_type="large cell carcinoma"
/tab_bost="DHIOB (phage-resistant)
/nab_bost="Dign" (phage-resistant)
/note="Organ: lung; Vector: pCWV-SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Site_2: Sall; cloned unidirectionally. Primer: Oligo dT.
Technologies.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M. A.G.E. Consortium (LLNL)
DNA Sequencing by: They Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://imaga.llnl.gov.d column: 17
                                                                                                                                                                                                                                                                                   394 aaataccgaaacattgatagtgaaaactggaagaccatcattaccaagaatctacattac 453
                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 755)
NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                       64
                                                                                                                                                                                                                                                                                                                          5 AAATACCGAAACATTGGTAGTGAAACATGGAAGACCATCATTACTAAGAATCTACATTAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        567 gacatcaccacaaggaaatcgggaaactaaaattcaagatatggactgtgtata 620
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                                                                                                                                                                                                       Length 715;
                                                                                                                                                                                                                     2.4e-22;
ches 36; Indels
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Pred. No. 2.4e-
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
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Location/Qualifiers
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Best Local Similarity 81.6%;
Matches 191; Conservative
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Observation Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage : By 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr - Genome Forbore cons.fr - Genome collaboration of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcokI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; cn bw sp, the same strain used for the BDGP's and how to order individual BAC clones, the entire library, and how to order individual BAC clones, the entire library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster genome survey sequence TET3 end of BAC # BACRO8K10 of RPCI-98 library from Drosophila melanogaster (fruit fly), genomic survey sequence.
                                                                                                                  527
                                                                                                                                                                                                                                                                                    182 AAAWAAAWWAAAWWAAAAATAWAAAWAWGCAAAATTATGAATTWAAAAWAAWAAWAAWW 123
                                                                                                                                                                             467
                                                                                         348 attatttccggataattttaaggaatgcacaatagaatatgaattaaaattacgaaacat 407
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                                                                                                                                                                             408 tgatagtgaaaactggaagaccatcattaccaagaatctacattacaaagatgggtttga
                                                                                                                                                                                                                       242 AAWAAAWAAWWTTAWTAAAAAWAAWWTGAWAWAAWATMGGTTAAWAAAATCGTTAMGA
                                                                                                                                                                                                                                                                  tettaacaaaggtattgaagcaaagataaacacaettetgecagcacaatgcacaatgg
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      Length 942;
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/db_xref="taxon:7227"
/db_mref="RPCI-98"
/clone=lib="RPCI-98"
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                                               81;
      DB 12;
8.0%; Score 49.6; DB
37.2%; Pred. No. 0.31;
tive 42; Mismatches
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122 WWAAAAWAAWAAAGT 107
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      Query Match
Best Local Similarity
Matches 73; Conserv
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Determination of this BAC-end sequence was carried out as part of a collaboration with the European Drosophila Genome Project (EDGP) - http://www.edgp.ebi.ac.uk - This Drosophila melanogaster BAC library (Dros BAC) was made by Alath Billand at CEPH (Centre d'Etude du Polymorphisme Humain) with funding provided by a MRC and Genevieve Payan. It has been constructed in the vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
                                                                                       335 matggcamcctccattatttcc---ggataattttaaggaatgc--acaatagaatatg 388
                                                                                                                                                                                                                                                                                                                                                                         aa-ttaaaaataccgaaacattgatagtgaaaactggaagaccatc-attaccaagaatct 446
                                                                                                                                                                             cctgcttgtttgcacagcatt---tggctctatgctttcaaatgctgagataaaagtta 277
                                                                                                                                                                                                                                                                atcctcctcaggattttgagatagt-ggaccctggatatttaggttatct--ctctttgc 334
                                                                                                                                                                                                                                                                                      447 acattac-aaagatgggtttgatcttaacaaaggtattgaagcaaagataaacacacttc 505
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                                                                                                                                                                                                                   62 CCTTTCTGATAAGCACAACATTGGCTGTACTTCATCTTACAGACACCGAGATAAAAGTTA 121
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Drosophila melanogaster

Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;

Muscomorpha; Ephydroidea; Drosophilldae; Drosophila.

1 (bases 1 to 942)
                                               16;
    Length 755;
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                                               Indels
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/plasmid⇒"pBeloBAC11"
  DB 10;
  Score 116.6; DB 10;
Pred. No. 1.8e-16;
0; Mismatches 79;
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/clone_l1b="DrosBAC"
/clone~"BACN13P09"
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  18.8%;
74.0%;
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                                            Matches 270;
  Query Match
Best Local S
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Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 365)

Adams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A., Bult

C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D., White

C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D., White

C.J., Lee, N.H., Kirkness, E.F., Weinstock, R.G., Gocayne, J.D., White

C.J., Lee, N.H., Fritchman, J.L., Geoghagen, N.S., Glodek, A.,

Gnehm, C.L., Hanna, M.C., Hedblom, E., Hinkle, P.S., Jr., Kelley, J.M.,

Kelley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M.,

Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Felligrino, S.M.,

Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shirley, R.,

Small, K.V., Spriggs, T.A., Otterback, T.R., Weidman, J.F., Li, Y.,

Bednarik, D.P., Cao, L., Cepeda, A., Fischer, C., Hastings, G.A., He, W.W.,

Hu, J.S., Greene, J.M., Gruber, J., Hudson, P., Kim, A.K., Kozak, D.L.,

Kunsch, C., Hungjun, J., Li, H., Meissner, P.S., Olsen, H., Raymond, L.,

Wei, Y.F., Wing, J., Xu, C., Yu, G.L., Resten, S.M., Dillion, P.J., Fannon,

Warn, Rosen, C.A., Haseltine, W.A., Fields, C., Fraser, C.M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               365 bp mRNA linear EST 18-APR-1997 ESP114178 HSC172 cells I Homo sapiens cDNA 5' end similar to IL13 AA298563
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                                                                                                                                                                                            195
                                                                                                135
                                                                                                                            catttggatgtcggattcctctataccctgcttgtttgcacagcatttggctctatgctt 255
                                                                                                                                                                                                                                                                                                                        583 YTYWTYTWTWHYHTWYTHAWAHTTWYHWYHWYHWHWMWHWTWHWTWHWTYTAAXXXY 642
                                                                                                                                                                                                                                                                                                                                                                                           256 tcaaatgctgagataaaagttaatcctccqggattttgagatagtggaccctggatat 315
                                                                                                                                                                                                                                                                                                                                                                                                                      643 YTCMYYYYHWHWHAHAHAAAAWWTTHTWWTHAYHWATYHYYYYYMYCAMMCMCTHTCHHCY 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           316 ttaggttatctcttttgcaatggcaacctccattatttccggataattttaaggaatgc 375
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        763 АМЖМИНАНҰАААААМААМАТТННҮННТНҰМНТҮМҮНҮҮМҮТССҮМСТҮНСМНҮҮНТА 822
75
                                                                                                actggagaagaagaaaaaagaggacctgtgataattgcctatgataattcatttcttga
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ttgtgtgtgttgattatcagacaggaagggaagtcttagagttctaatttaatgtctccaa
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/organism="Homo sapiens"
/db_xref="ATCC (inhost):178283"
/db_xref="ATCC (inhost):178283"
/db_xref="Atxon:9606"
/clone_ltb="HSC172 cells I"
/cell_type="fibroblast"
/cell_the="HSC172 (16PDL)"
/dev_stage="fetal"
/dev_stage="fetal"
/note="Organ: lung; Vector: pBluescript SK-; Site_1: ECORI
/site_2: XhoI"
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The Institute for Genomic Research 9712 Medical Center Drive, Rockville, MD 20850 USA 19712 Medical Center Drive, Rockville, MD 20850 USA 19712 Medical Center Drive, Rockville, MD 20850 USA 19713 Email: arkerlav@tigr.org

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86.2%; Pred. No. 2.8;
cive 0; Mismatches
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Job time: 9700 sec
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Sequence 108, App Sequence 16, App Sequence 16, Appl Sequence 110, Appl Sequence 110, Appl Sequence 3, Appl Sequence 6, Appli Sequence 6, Appli Sequence 11, Appli Sequence 1, Appli

Sequence 1, Apr Sequence 21, Apr Sequence 21, Apr Sequence 22, Apr Sequence 75, Apr

Sequence:

Run on:

Searched:

Minimum Maximum Database

Result

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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,572
US-09-099-639-108
PCT-US95-08071-108
US-08-322-62-116
US-08-466-961A-16
US-08-745-193B-18
US-08-745-195-101
US-08-170-294-6
US-08-170-294-6
US-08-170-294-6
US-08-649-289-6
US-08-049-289-6
US-08-073-281-1
US-09-031-446-1
US-09-031-442A-21
US-09-031-442A-21
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US-09-031-442A-21
US-09-28-28-28
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APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESSONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
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CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: BLOWN, SCOLT A.
REGISTRATION NUMBER: 32,724
REGISTRENCE/DOCKET WUMBER: G15268
TELEPHONE: (617) 498-8224
TELEPAN: (617) 876-5851
INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
CITY: Cambridan
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      ZIP: 02140
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy (
COMPUTER: IBM PC COM
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US-08-846-340-3

US-08-846-340-1

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US-08-340-1

US-08-232-463-14

US-09-118-319-1

US-09-233-086-2

US-09-233-086-2

US-09-235-836C-71

US-08-255-836C-69

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US-08-235-836C-69

US-08-323-170B-1

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US-08-453-695A-108
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Copyright (c) 1993 - 2000
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TELECOMMUNICATION INFORMATION:
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  DB 1; Length 1369;
                          Indels
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COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/841,751
                         73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: DONALGSON, Debra
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whitters, Mathew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
Score 341.2; DB 1
Pred. No. 2.6e-85;
0; Mismatches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Genetics Institute, Inc.
STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Brown, Scott A. REGISTRATION NUMBER: 32,724 REFERENCE/DOCKET NUMBER: G15268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3, Application US/08841751
Patent No. 6214559
55.0%;
84.0%;
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                         Matches 398; Conservative
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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STATE: MA
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US-08-841-751-3
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  Query Match
                Best Local
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Pred. No. 2.6e-85;
0; Mismatches 73;
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APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Fitz, Lori
APPLICANT: Whitters, Matthew
APPLICANT: Whitters, Matthew
APPLICANT: Whitters, Matthew
APPLICANT: Worlders, CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSE: Genetics Institute, Inc.
STREET: GambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/08846340 Patent No. 6248714
TELEPHONE: (617) 498-8224
TELEFAX: (617) 496-8224
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1369 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
FEATURE:
                                                                                                                                                                                                                                                                                         55.0%;
84.0%;
                                                                                                                                                                                                                                                                                                                            Conservative
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103..1245
                                                                                                                                                                                                                                                                                                         Similarity
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                                                                                                                                                                                                 NAME/KEY:
COCATION:
US-08-841-751-3
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Matches 398;
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Sequence 3, Application US/08846344
Patent No. 6268480
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Best Local Similarity
Matches 398; Conserv
              Patent No. 6268480 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HYPOTHETICAL: NO
                                                                                                                                                                                                                         USA
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                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                      02140
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
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                                                                                                                                                                                                          STATE: M
COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1369;
                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.0%; Score 341.2; DB 4 84.0%; Pred. No. 2.6e-85; iive 0; Mismatches 73
                                                                                                                                                                       ATTORNEY/AGENT INFOLLED.

NAME: Brown, Scott A.

REGISTRATION NUMBER: 32,724

REFERENCE/DOCKET NUMBER: G15268

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 498-8224

TELEFAX: (617) 498-824

TELEFAX: (617) 876-5851

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 1369 base pairs

TYPE: nucleic acid

"""DANDEDNESS: double
                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 84.0
Matches 398; Conservative
             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                           CDS
103..1245
                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
                                                                                                                       CLASSIFICATION:
                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                         : NAME/KEY:
; LOCATION:
US-08-846-340-3
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US-08-846-344-3
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129 ATGCTTATATACCTTTCTGATAAGCACACATTTGGCTGTACTTCATCTTCAGACACCGA 188
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Pred. No. 2.6e-85;
0; Mismatches 73;
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whitters, Matthew
APPLICANT: Whitters, Matthew
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
                                                                                                                                                                                  ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS: LEWOTH: 1959 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55.0%;
84.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Whody Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/841,75
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/08841751
Patent No. 6214559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Brown, Scott A. REGISTRATION NUMBER: 32,724
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NAME: Brown, Scott A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Cambridge
STATE: MA
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US-08-841-751-1
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                                                                                                                                                                       489 GATATCACCACAAGGAATTCCAGAAACTAAAGTTCAGGATATGGATTGCGTATA 542
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 311.2; DB 1;
Pred. No. 5.3e-77;
0; Mismatches 128;
                                                                                                                                                                                                                                                                                                              APPLICANT: COLLINS, MARY
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, LOTI
APPLICANT: Whitte, LOTI
APPLICANT: Woben, Tamlyn
APPLICANT: Wood, Clive
TITLE OF INVENTION: CTTOXINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Genetics Institute, Inc. STREET: 87 CambridgePark Drive CITY: Cambridge STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: BEOWN. SCOULE A: RECISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G1526
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
                                                                                                                                                                                                                                                                   Sequence 1, Application US/08609572
Patent No. 5710023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.2%;
74.8%;
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Past Local Similarity 74.0v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 256..1404
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                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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US-08-609-572-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches 128;
                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,340
 CYTOKINE RECEPTOR CHAIN
                                         ADDRESSEE: Genetics Institute, STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/609,572
                                                                                                                                                                                                                                                                                                              NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G152(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                     FILING DATE: ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 1525 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 74.8
Matches 437; Conservative
                                                                                 STATE: MA
COUNTY: USA
ZIP: 02140
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
              NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                     Cambridge
                                                                                                                                                                                                                             FILING DATE:
CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; NAME/KEY:
; LOCATION:
US-08-846-340-1
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                                                                                                                                                                                                                                           Length 1525
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Pred. No. 5.3e-77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/08846340;
Patent No. 6248714
GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Fitz, Lori
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whitters, Mathew
APPLICANT: Wood, Clive
           TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LEWOTH: 1525 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                        50.2%;
74.8%;
                                                                                                                                                                                                                                                       Best Local Similarity 74.8
Matches 437; Conservative
                                                                                                                                                                      CDS
256..1404
                                                                                                               linear
                                                                                                          TOPOLOGY: line:
MOLECULE TYPE: CI
HYPOTHETICAL: NO
                                                                                                                                                                   ; NAME/KEY:
; LOCATION:
US-08-841-751-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION
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                                                                                                                        Version #1.25
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Pred. No. 5.3e-77;
0; Mismatches 128;
                                                                                                                                                                                                                                                                  APPLICANT: Collins, Mary
APPLICANT: Collins, Mary
APPLICANT: Collins, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Whodo, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
STREET: 87 Cambridge
CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PECENTIN Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Brown, Scott A.
REGISTRATION UNBER: 32,724
REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
                                                                                                                                                                                                                           Sequence 1, Application US/08846344
Patent No. 6268480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEGUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 74.8%;
Matches 437; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: double
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256..1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HYPOTHETICAL: NO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LOCATION:
US-08-846-344-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
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229 GCTTTCAGCACACTAAATCCTGGAGAAATGGCTTT-----TGTGCATATCAGATGCTTG 282
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tataccctgcttgtttgcacagcatttggctctatgctttcaaatgctgagataaaagtt
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: SCHEIFLINGER, F.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
CORRESPONDENCE: 52
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1800 Diagonal Road, Suite 500 CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EP 91 114 300.6
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APPLICATION NUMBER: US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/232,463 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
2IP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 26-AUG-1991
ATTORNEY AGENT INFORMATION:
NAME: BENT, Stephen A
REGISTRATION NUMBER: 29,768
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Query Match
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APPLICANT: Chen, Huizhong
APPLICANT: Chen, Huizhong
APPLICANT: Ljungdahl, Lars G.
TITLE OF INVENTION: Orpinomyces Cellulase CelF Protein and Coding Sequences
FILE REFERENCE: 33-98sequence listing
CURRENT APPLICATION NUMBER: US/09/118,319
CURRENT FILING DATE: 1998-07-17
NUMBER OF SEC ID NOS: 9
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       accatcattaccaagaatctacattacaaagatgggtttgatcttaacaaaggtattgaa 486
                                                                                                                                                                                                                                                                                                                                      247 tctatgctttcaaatgctgagataaaagttaatcctcctcaggattttgagatagtggac 306
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                                                                                                                                                                                                                                                                                                                                                                                                         cctggatatttaggttatctctctttgcaatggcaacctccattatttccggataatttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aaggaatgcacaatagaatatgaattaaaataccgaaacattgatagtgaaactggaag
                                                                                                                                                                                                                                                                       Score 39; DB 1; Length 7218;
                                                                                                                                                                                                                                                                    Query Match 6.3%; Score 39; DB 1; Length 721
Best Local Similarity 5.8%; Pred. No. 0.15;
Matches 21; Conservative 187; Mismatches 157; Indels
          30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/09118319 Patent No. 6114158
REFERENCE/DOCKET NUMBER: 3047
TELECOMMUNICATION INFORMATION:
TELEFHONE: (703)635-9300
TELEFAX: (703)63-4109
TELEFAX: (703)63-4109
TELEFAX: (703)63-4109
TELEFAX: 703)63-4109
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pairs
TYPE: nucleic acid
STRANDENESS: single
TYPE: nucleic acid
STRANDENESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
CLONE: pTZgpt-F1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Orpinomyces sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NAME/KEY: intron
; LOCATION: (187)..(297)
US-09-118-319-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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LENGTH: 1631
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Sequence 25, Application US/09354243B
Patent No. 635917
GENERAL INCORMATION:
GENERAL INCORMATION:
APPLICANT: Dumoutler, Laure
APPLICANT: Dumoutler, Jamila
APPLICANT: Couhed, Jamila
APPLICANT: Renauld, Jean-Christophe
TITLE OF INVENTION: (TIFs)
TITLE OF INVENTION: The Proteins Encoded, and Uses Thereof
FILE REFERENCE: LUD 5543.1
CURRENT APPLICATION NUMBER: US/09/354,243B
CURRENT FILING DATE: 1999-07-16
PRIOR APPLICATION NUMBER: US/09/178,973
PRIOR FILING DATE: 1998-10-26
NUMBER: OF SEQ ID NOS: 29
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                                                                                                                                                                                                                                                         61 ataaacctttttctaattatttaaaaaaagcacaatgaaaattttactttttgccagtat 120
                                                                                                                                                                                                                                    atttggctctatgctttcaaatgctgagataaaagttaatcctcctcaggattttgagat 299
                                                                                                                                                                                                                                                                                                                                    24] tttaagtattgattattttaaattattatattacttataacaaattaagatatatagtga 300
                                                                             120 ataattcatttcttgagaaaccatattattgagtggaaacttcaaagtattgaatcttgg 179
                                                                                                                                                     180 aggaatggettteatteatttggatgteggatteetetataeeetgettgtttgeacage 239
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                                                                                                   300 agiggaccciggatatttaggitatctctttgcaatggcaacc···tccattatttcc
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Length 1631;
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Score 36.2; DB 3;
Pred. No. 0.54;
0; Mismatches 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 35.2; DB; Pred. No. 1.5; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.7%;
5.8%;
ilarity 47.2%;
Conservative (
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Best Local Similarity 53.77
Matches 73; Conservative
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ORGANISM: Homo sapiens
                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417 aaact 421
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US-09-354-243B-25
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US-09-233-086-2
                                      Matches 144;
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1090 TTGCAGGAGCAGCTTAAAGAAACTAGCGATGAAAATCAAAAAAGAGAAATTGAAAAAGAA 1149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1210 CTTAATCGAGATTTAAATTCTAAAGCTTCTAGTAAAGAAAAATTAAAGGCAAAGAAAA 1269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      391 ttaaaaataccgaaacattgatagtgaaaactggaagaccatcattaccaagaatctacat 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331 ttgcaatggcaacctccattatttccggataattttaaggaatgcacaatagaatatgaa 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451 tacaaagatgggtttgatcttaacaaaggtattgaagcaaagataaacacacttctgcca
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 34.6; DB 4; Length 2081; Pred. No. 1.6; 0; Mismatches 109; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1270 GAAATAGTCAAAGAGAAATCAAAGGTAAG 1298
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Patent No. 6310046
GENERAL INFORMATION:
TYPICE OF INVENTION:
TYPICE OF INVENTION:
NUMBER OF SEQUENTION:
CORRESPONDENCE: 4
CORRESPONDENCE: 4
CORRESPONDENCE: 1 OAD MORTAN
STREET: USA MRMC - MCMR-JA
CITY: FORT DETRICK, FREDERICK
STREET: USA MRMC - MCMR-JA
CITY: FORT DETRICK, FREDERICK
STREET: USA MRMC - MCMR-JA
CITY: FORT DETRICK, FREDERICK
STREET: USA MRMC - MCMR-JA
CITY: FORT DETRICK, FREDERICK
STREET: USA MRMC - MCMR-JA
COUNTRY: USA
IPP: 21702-5012
COMPUTER: APPLIE MACINICSH
COMPUTER: APPLIE
COMPUTER: APPLIE MACINICSH

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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/559,896B
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REGISTRATION NUMBER: 26,313
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (301) 619-2065
TELEPHONE: (301) 619-714
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 11956 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 5.6%;
Best Local Similarity 47.8%;
Matches 100; Conservative
                                                                     2081 base pairs
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                             nucleic acid
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                                                                                                                                                                                                                                                                                                         1..2081
                                                                                                                                                                                                                                                                          NAME/KEY: CDS
                                                                                                    TYPE: nuclei
STRANDEDNESS:
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US-08-235-836C-71
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US-08-559-896B-1
                                                                     LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520 acaaatggatcagaagttagaagttcatgggcagaaactacttattggacatcaccacaa 579
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Patent No. 6248562
GENERAL INCOMATION:
APPLICANT: Duft, Bonjamin J.
TITLE OF INVENTION: Borrella Polypeptides and Uses Therefor NUMBER OF SEQUENCES:
ADRESPONDENCE ADDRESS:
ADDRESSEE: Brookhaven National Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 5836;
                                                                                         APPLICANT: Bartel, Paul L.
APPLICANT: Tavtiglan, Sean V.
APPLICANT: Tavtiglan, Sean V.
APPLICANT: Myriad Genetics, inc.
TITLE OF INVENTION: MMSC1 - An MMAC1 Interacting Protein
FILE REFERENCE: MMSC1 Gene
CURRENT APPLICATION NUMBER: US/09/233,086
CURRENT FILING DATE: 1999-01-19
EARLIER FILING DATE: 1999-01-20
SEARLIER FILING DATE: 1998-01-20
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PATENTIN Ver. 2.0
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TEM PC compatible
CORPUTER: TEM PC compatible
CORRENT MEDICATION DATA:
APPLICATION NUMBER: US/08/235,836C
FILING DATE: 29-APR-1994
CLASSIFICATION NUMBER: US/08/135,836C
FILING DATE: 01-11-93
ATYONEY/AGENT INFORMATION:
NAME: BOGOSIAN, MATGATEL C.
REGISTRATION NUMBER: 25,324
REFERRENCE/DOCKET NUMBER: 25,324
REFERRENCE/DOCKET NUMBER: 25,324
REFERRENCE/DOCKET NUMBER: 25,324
REFERRENCE/DOCKET NUMBER: 25,324
REFERRENCE/OFFET NUMBER: 25,324
RELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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Pred. No. 1.6;
0; Mismatches 38;
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   Sequence 2, Application US/09233086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 60.4%;
Matches 58; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; NAME/KEY: CDS
; LOCATION: (115)..(5757)
US-09-233-086-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                               Patent No. 6337192
GENERAL INFORMATION:
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US-08-235-836C-71
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LENGTH: 5836
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
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                                                                                                                                                                                                                           822 ATTATATAGAGTATACCTAGAAGAATTAGAAAAAATAGACAAGGAAGAAAAAGAAAAAT 881
                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Designation of the proteins Comprising TITLE OF INVENTION: No. 6548562el Chimeric Proteins Comprising TITLE OF INVENTION: Borrelia Polypeptides and Uses Therefor NUMBER OF SEQUENCES: 144

CORRESPONDENCE ADDRESS:
ADDRESSEE: Brookhaven National Laboratory
STREET:
                                                                                                                                              .
0
                                                                                                  Score 34.4; DB 4; Length 1956;
Pred. No. 1.8;
0; Mismatches 76; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/235,836C FILING DATE: 29-APR-1994
                                                                                                                                                                                                                                                                                                                                                           468 tottaacaaaggtattgaagcaaagataaacacact 503
                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/148,191
FILING DATE: 01-11-93
ATTORNEY/AGENT INFORMATION:
NAME: BOGOSIAIN, MATGATET C.
REGISTRATION NUMBER: 25,324
REFERENCE/POCKET NUMBER: 25,324
RELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-08-235-836C-69
Sequence 69, Application US/08235836C
Patent No. 6248562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Dunn, John J.
APPLICANT: Luft, Benjamin J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (516) 282-7338
TELEFAX: (516) 282-3729
INFORMATION FOR SEQ ID NO: 69:
SEQUENCE CHARACTERISTICS:
LENGTH: 1991 base pairs
                                                                                                  sch 5.5%;
11 Similarity 51.3%;
80; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: double
Double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
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                                                                                                  Query Match
Best Local Similarity
Matches 80; Conserva
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
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LOCATION:

US-08-235-836C-69
  ; STRANDEDNE;
; TOPOLOGY:
US-08-559-896B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: UP
STATE: N
COUNTRY:
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Query Match Best Local Similarity

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                                                                             1089 TTTGCAAGAGCAGCTTAAAGAAGCTAGTGATGAAAATCAAAAAAGAGAAATAGAAAAGCA 1148
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interleukin

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Canine IL-13R/IgG-
Canine IL-13Ralpha
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              Novel isolated canine protein, preferably canine immunoglobulin G
protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, the nucleic acids encoding them, antibodies and related against them, tusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a CDNA
                                                                                                                                                                                 Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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  the nucleic acids encoding them,
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LL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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protein or canine interleukin-13 receptor protein useful for regulating
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Immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13)
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P-PSDB; AAU69135.
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                            Length 1454;
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Sequence 1454 BP; 491 A; 238 C; 282 G; 442 T; 1 other;
                           Score 620; DB 22;
Pred. No. 1.4e-153;
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              Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; LL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                              Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IGG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                                                                                                                                                                                  aagaccatcattaccaagaatctacattacaaagatgggtttgatcttaacaaaggtatt
present sequence encodes a protein of the invention.
                                                                                                                                                                                        tttaaggaatgcacaatagaatatgaattaaaataccgaaacattgatagtgaaaactgg
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0
                                           Length 1158;
                                                           0; Indels
                 353 T; 0 other;
                                                  2.1e-105;
                                           DB
                                          Query Match 70.5%; Score 437; DB Best Local Similarity 100.0%; Pred. No. 2.1 Matches 437; Conservative 0; Mismatches
                BP; 380 A; 201 C; 224 G;
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AAS59965/c
ID AAS59965 standard; cDNA; 1158
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therapy). The
                Sequence 1158
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (19G) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, tusion proteins between the 1gG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are agable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA conding a protein of the invention.
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          Novel isolated canine protein, preferably canine immunoglobulin {\tt G} protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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100.0%; Pred. No. 2.1e-105;
ive 0; Mismatches 0;
                                                                    Claim 19; Page 179; 221pp; English.
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Matches 437; Conservative
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;

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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (1gG) protein or canine interleukin-13 (IL-13) (acceptor protein, the nucleic acids encoding them, antibodies raised against them, the nucleic acids encoding them, antibodies and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
                    Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                              Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds
  Immunoglobulin heavy chain; IgG Fc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 19; Page 184-185; 221pp; English
  IL-13Ralphal; IR-13Ralpha2;
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                                                                                                                                                                                                                                                                                            (HESK-) HESKA CORP.
                                                                             Canis familiaris.
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P-PSDB; AAU69137
                                          Lmmune response.
                                                                                                                 WO200177332-A2.
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0; Length 954; Indels Query Match 60.3%; Score 374; DB 22; Best Local Similarity 100.0%; Pred. No. 7.7e-89; Matches 374; Conservative 0; Mismatches 0;

Sequence 954 BP; 329 A; 162 C; 192 G; 271 T; 0 other;

ö 426 124 aaggaatgcacaatagaatatgaattaaaataccgaaacattgatagtgaaaactggaag 183 486 Gaps aaggaatgcacaatagaatatgaattaaaataccgaaacattgatagtgaaaactggaag accatcattaccaagaatctacattacaaagatgggtttgatcttaacaaaggtattgaa tgggcagaaactacttattggacatcaccacaaggaaatcgggaaactaaaattcaagat accatcattaccaagaatctacattacaagatgggtttgatcttaacaaaggtattgaa gcaaagataaacacattctgccagcacaatgcacaaatggatcagaagttagaagttca 247 4 184 244 307 64 367 547 427 487 ò 8 à g à g ð g à qq ò

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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain)
                                                                                                                                                                                                                                                                     Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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                                                                                                                                                                                                                                     Canine IL-13R extracellular domain cDNA nCaIL-13Ralpha2 954 complement.
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ID AAS59969 standard; cDNA; 954
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2000US-195874P.
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                                   364 atggactgtgtata 377
607 atggactgtgtata
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, tension proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IGC heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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P-PSDB; AAU69136.
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                                              Length 1095;
                                                                   0; Indels
           G; 328 T; 0 other;
                                            60.3%; Score 374; DB 22;
100.0%; Pred. No. 8e-89;
.ive 0; Mismatches 0;
           Sequence 1095 BP; 370 A; 186 C; 211
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                                                        Best Local Similarity 100.
Matches 374; Conservative
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                                                                           The invention concerns an isolated canine protein, preferably canine immunoglobulin G (1gG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Rapha or IL-13. The regulators are useful for treating canine 1gG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention therapy). The present sequence is immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA cooling a protein of the invention.
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
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100.0%; Pred. No. 9.2e-89;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 37; Page 187-190; 221pp; English.
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09-APR-2001; 2001WO-US11498
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2000US-195874P
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Matches 374; Conservative
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P-PSDB; AAU69138.
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                                                                                                   Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel isolated canine protein, preferably canine immunoglobulin Greptotein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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                                                                   Canine IL-13Ralpha2/IgG-Fc fusion protein cDNA reverse complement.
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100.0%; Pred. No. 9.2e-89;
ive 0; Mismatches 0;
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Best Local Similarity 100.
Matches 374; Conservative
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                                                                                                                                                                                               Canis familiaris.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
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ive 0; Mismatches 0;
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IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                                                                                                                                                                                                                                                                                                                           Canine IL-13Ralpha2/IgG-Fc fusion protein cDNA reverse complement #4
aaggaatgcacaatagaatatgaattaaaataccgaaacattgatagtgaaaactggaag
                                                                                                     accatcattaccaagaatctacattacaagatgggtttgatcttaacaaaggtattgaa
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                                                                                                                                                  Claim 37; Page 212-213; 221pp; English
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when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA encoding a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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100.0%; Pred. No. 9.2e-89;
iive 0; Mismatches 0;
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Matches 374; Conservative
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                                                                                                                                                                 The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IGG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
                                                               Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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                                                                                                                                    Claim 37; Page 200-203; 221pp; English
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Best Local Similarity 100.0
Matches 374; Conservative
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Copyright (c) 1993 - 2000 Compugen Ltd.
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and canine il-13
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Pred. No. 2e-127;
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Mammalia; Eutheria; Carnivora;
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AX280321
                                                                                                   Query Match

Best Local Similarity 100.0%;
Matches 620; Conservative 0;
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/product="interleukin 13 receptor alpha chain 2"
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SQOFIRPSYFIROLOMIVKMPRPDYLSLTVRNSEINLKWMRKGFIPARKCFIVEIEF
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WRETLVFFLIFFAFVSIFVLVITCLLLXRQRALLKTFHTKKEVFSHQDTFC"
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                                                                                         Tang, L.
Direct Submission
Submitted (18-OCT-2000) Allergy and Immunology, Heska Corporation,
1613 Prospect Parkway, Fort Collins, CO 80525, USA
Location/Qualifiers
           IL-13 receptor alpha chain (alphal of corresponding mRNAs in canine
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Molecular cloning of canine IL-13 receptor alpha cha abba2) cDNAs and detection of corresponding mRNAs itissues
Vet. Immunol. Immunopathol. 79 (3-4), 181-195 (2001)
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100.0%; Pred. No. 1.8e-127;
:ive 0; Mismatches 0;
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/db_xref="taxon:9615"
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/gene="IL13Ra2"
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REDGTTWYTTYPRENEIGHTSNESORKCFLYRSKNNIYCSDGIWSEWSDEQCWKGDI
REDGTTWYTTYPRENEIGHTSNESORKLELLYKORALLKYIFHTKKEVFSHQDTFC"
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/organism="Canis familiaris"
/db_xref="taxon:9615"
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/note="unnamed protein produc
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Patent: WO 0177332-A 60 18-OCT-2001;
Heska Corporation (US)
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Sequence 60 from Patent W00177332.
AX280325
AX280325.1 GI:16607703
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Mammalia; Eutheria; Carnivora;
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          Compositions and methods related to canine igg and canine il-13
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  tttggctctatgctttcaaatgctgagataaaagttaatcctcctcaggattttgagata
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Carnivora; Fissipedia; Canidae;
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100.0%; Pred. No. 5.9
iive 0; Mismatches
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Sequence 63 from Patent WO0177332.
AX280328 GI:16607706
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Mammalia; Eutheria; Carnivora;
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Location/Qualifiers
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Best Local Similarity 100.
Matches 437; Conservative
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
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agttcatggggagaaactacttattggacatcaccacaaggaaatcgggaaactaaaatt 600
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100.0%; Pred. No. 1.8e-127;
.ive 0; Mismatches 0;
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/organism-"Canis familiaris"
/db_xref⊷"taxon:9615"
1 282 c 238 g 491 t
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AX280327
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       tttaaggaatgcacaatagaatatgaattaaaataccgaaacattgatagtgaaactgg
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Mammalia, Eutheria, Carnivora, Fissipedia, Canidae,
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/db_xref="taxon:9615"
224 c 201 g 380 t
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Mccall,C.A. and Tang,L.
Compositions and methods related to
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AX280329
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Location/Qualifiers
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AECTDYIKVNGKNMGGREPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPM
PPDYLSLYKNSEINLKWNMPKGPIPAKCFIYEIFFTEGGTTWYTTYENEIQITRT
SNESOKLCFLVRKNITSCSDGGIWSEWSDEQCWKGDIWKET"
162 c 192 g 271 t
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   PAT 02-NOV-2001
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Canis familiaris
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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al Similarity 100.0%; Pred. No. 5.4e-73;
374; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                              product"
     DNA
                                                                                                                                                                                                                                                                          /organism="Canis familiaris"
/db_xref="taxon:9615"
1. >954
/note="unnamed protein produ
                                                                                                                                                1 (sites)
Mccall,C.A. and Tang,L.
Compositions and methods related to
                                                                                                                                                                                                           Patent: WO 0177332-A 68 18-OCT-2001;
Heska Corporation (US)
Location/Qualifiers
1. 954
AXZB0333 954 bp I Sequence 68 from Patent WO0177332. AXZB0333
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DEFINITION AX280335/c

RESULT

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ACCESSION VERSION KEYWORDS SOURCE

ORGANISM

AUTHORS TITLE

JOURNAL

FEATURES

REFERENCE

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/bcarei="G1:166077019"
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                                                                                                                                                                                                                                                                                       ETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLLDHSA
ECTDYIKNWGKNMGGRFPYLESSDYKDFYICVNGSSESQPIRPSYFTFQLQNIVKPMP
PDYLSLTVKNSEBINLKWMPKGPIPAKCFIVEIEFTEDGTTWYTTVENEIQITRTS
NESOKLCFLVRSKYNTYCSDDGIWSPWSDEGCWKGDIWKETLVFFLIPFAFVSIFVLV
ITCLLLYKORALLKTIFHTKKEVFSHQDTFC
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Enalis familiaris
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
\mbox{Mccall}, C.A. and \mbox{Tang}, L. Compositions and methods related to canine igg and canine il-13
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100.0%; Pred. No. 5.3e-73;
.ive 0; Mismatches 0; Indels
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/note="unnamed protein product"
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/db_xref="taxon:9615"
                                                    Patent: WO 0177332-A 65 18-OCT-2001;
Heska Corporation (US)
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Sequence 67 from Patent WO0177332.
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tive 0;
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
1 (sites)
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Canis.
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and canine il-13
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Mammalla; Butheria; Carnivora; Fissipedia; Canidae;
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Best Local Similarity 100.0%; Pred. No. 5.4e-73;
Matches 374; Conservative 0; Mismatches 0;
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Patent: WO 0177332-A 70 18-OCT-2001;
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Sequence 70 from Patent WO0177332.
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AX280330
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                                          KEVHTAKTQSREQQFNGTYRVVSVLPIEHQDWLTGKEFKCRVNHIDLPSPIERTISKA
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184 c 182 g 407 t
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Canis.
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and canine il-13
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100.0%; Pred. No. 5e-73;
ive 0; Mismatches 0; Indels
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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Best Local Similarity 100.0%; Pred. No. 5e-73;
Matches 374; Conservative 0; Mismatches 0;
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/db_xref="taxon:9615"
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Patent: WO 0177332-A 73 18-OCT-2001;
Heska Corporation (US)
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AX280338
AX280338.1 GI:16607716
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TIEYELKYRNIDSENWKTIITKNLHYKDGFDLWKGIEAKINTLLPAQCTNGSEVRSSW
AETTYWTSPQGNRETKIQDMDCVYXNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHS
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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Best Local Similarity 100.0%; Pred. No. 5.3e-73;
Matches 374; Conservative 0; Mismatches 0;
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/organism="Canis familiaris"
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Patent: WO 0177332-A 71 18-OCT-2001;
Heska Corporation (US)
Location/Qualifiers
Patent: WO 0177332-A 67 18-OCT-2001;
Heska Corporation (US)
Location/Qualifiers
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/db_xref="G1:16607715"
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AX280347/c
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Mammalla; Eutherla; Carnivora; Fissipedia; Canidae; Canis.
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Compositions and methods related to canine igg
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
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/db_xref="taxon:9615"
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Patent: WO 0177332-A 82 18-OCT-2001;
Heska Corporation (US)
Location/Qualifiers
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100.0%; Pred. No. 5e-
ive 0; Mismatches
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BF53126 UT-R-C3-S
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AL562513 LTI_NFL003_NBC3 Homo sapiens cDNA clone CS0DC012YF21 3
primm, mRNA sequence.
AL562513.1 GI:12911007
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                        ALIGNMENTS
                                            BF568964

AW001800

R52796

BE1828427

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BA921043

AIS47789

AZ108580

CNS018580

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CNS010EX
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BG778615 602668073
                                                             time 4150.53 Seconds alignments)
Million cell updates/sec
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                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                             September 23, 2002, 13:33:52
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         GenCore version
Copyright (c) 1993 - 2000
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Maximum Match 100%
Listing first 45 summaries
                                            - nucleic search, using sw model
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BASE COUNT

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/note="Organ: pooled; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I: Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (fetal lung NbHL19W, testis NHT, and B-cell NCI_CGAP_GCBI) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M. A.G.E. clones 297480-302087, 682632-687239, 726408-72871, and 729096-731399. Subtraction by Bento Soares and M. Fatima Bonaldo.
1 (bases 1 to 676)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                     Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Lengort: 882 Std Error: 0.00
Seq primer: -400P from Glbco
High quality sequence stop: 468.
Location/Qualifiers
1. 676
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                                                            Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
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IMAGE:2348766 3' Similar to SW:II32_HUMAN Q14627 INTERLEUKIN-13
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                              Length
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                                                                                                  4; Mismatches 137;
                                                          Score 485.2; DB 9 Pred. No. 6.3e-72;
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                                                          55.3%;
80.1%;
                                                                                                  Matches 578; Conservative
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VERSION KEYWORDS SOURCE ORGANISM

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/lab.host="DH10B"
/note="Corgan: brain vector: pcWNSPORT 6; lst strand cDNA
was primed with a NotI-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the NotI and Bco RV sites of the pcWNSPORT 6
vector. Library was normalized. Library was constructed
by Life Technologies. Contact: Feng Library was constructed
Technologies, a division of Invitrogen 9800 medical Center
Prive Rockville, Maryland 20850, USA Fax: (1) 301 610
                                                                                                                                                                                                                                                 AL525497 LTI_NFL003_NBC3 Homo sapiens cDNA clone CSODC012YF21 5 prime, mRNA sequence.
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Li, W.B., Gruber, C., Jessee, J. and Polayes, D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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TTAATATTAGTTATATTTGTAACCGGTCTGCTTTTGCGTAAGCCAAACCCCTACCCAAAA 137
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
                                            715 acgat----ctttcatacaaaaaaaagaagtcttttctcatcaagacacattctgttg
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172 c 201 g 285 t 1
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CSODC012YF21"
/clone=lib="LTI_NFL003_NBC3"
/sex="male"
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/ Organism="Homo sapiens"

/ Organism="Homo sapiens"

/ Ob_xref="taxon:9666"

/ Clone="InAGE:3876064"

/ Clone=lib="NHH_MGC_68"

/ Lissue_type="large_cell carcinoma"

/ Lab_host="DH10B (phage-resistant)"

/ Ab_host="Organ: lung; Vector: pCMV-SPORT6; Site_l: NotI;

Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.

Average insert size 1.8 kb. Library constructed by Life

"...honlogies."
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 926)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE620022 926 bp mRNA linear EST 20-OCT-20 601473365T1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3876064 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-remail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
found through the I.M.A.G.E. Consortium/LLNL at:
High quality sequence start: 26
High quality sequence start: 26
High quality sequence stop: 704.
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NH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
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Pred. No. 3.6e-49;
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BE620022
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Best Local Similarity 75.5
Matches 567; Conservative
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SM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 867)

SN IH-MCC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov

Tissue Procurement: David N. Louis, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: Theyte Genomics, Inc.

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
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                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="MAGE resequences, M
/note="Vector: pBluescriptsKm"
/7 c 88 g 143 t
                                                                                                                                                                                                                       Score 320.2; DB 9
Pred. No. 3.1e-44;
0; Mismatches 78
                                            Location/Qualifiers
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BF525412
BF525412.1 GI:11612773
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Best Local Similarity 82.5%;
Matches 367; Conservative (
johnq@tigr.org
62
Email: johnq@tigr.or
Plate: 62
Seq primer: Reverse.
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Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Assessment of gene expression patterns in a model of colon tumor metastasis using a 19,200 element CDNA microarray motubilished (2000).

Contact: John Quackenbush
The Institute for Genomic Research
712 Medical Center Dr., Rockville, MD 20850, USA
721: 301 838 3528
Fax: 301 838 0208
                                                                                                                                                   tagicitacigigaagaaticagaggaaattaaccigaaatggaacaigcciaaaggacc 395
                                                                                                                                                                                                                                                                                                            TATTCCAGACAAGGTGTTTTGATTATGAAATTGAGATCAGAAGATGATACTACCTTGG 346
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                 tgataccaattaccagttgttttactggta--tgagggcttggaccattcagcagagtgt 156
                                                                                                                                                                                                                                                                                                                                                              cattccagccaa-atgtttcatttatgaaattgaattcacagaggatggtactacttggg 454
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Hegde, P., 01, R., Abernathy, K., Dharap, S., Gaspard, R., Gay, L.E., Saeed, A.I., Sharov, V., Lee, N.H., Yeatman, T.J. and Quackenbush, J.
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514

285

629

91

889

DEFINITION ACCESSION VERSION

RESULT AW954333

LOCUS

ORGANISM

KEYWORDS SOURCE

REFERENCE AUTHORS

JOURNAL TITLE

COMMENT

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AW629184.1 GI:7375974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 73.34
Matches 417; Conservative
                                                                                                                                                    Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177
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ORGANISM
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                                                                     //organism="Homo sapiens"
/db_xref="taxon:9606"
/dlone="lyAGE:4212574"
/clone="INAGE:4212574"
/clone="INAGE:4110blastoma with EGFR amplification"
/tissue_type="qlioblastoma with EGFR amplification"
/lab_host="DH10B (Tl phage-resistant)"
/nde="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI;
/nde="Crangan: brain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.57 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
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found through the I:M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM9783 row: i column: 23
High quality sequence stop: 677.
Location/Qualifiers
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                                                                                                                                                                                                    BASE COUNT
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/ncce="Organ: pooled: Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (fetal lung NbHL19W, testis NHT, and B-cell NCL_CGAP_CGI) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hypridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M. A.G.E. clones 297480-302087, 682632-687239, 726408-728711, and 729096-731399. Subtraction by Bento Soares and M. Fatima Bonaldo. " 109 c 107 g 186 t
                                                                                                                                                                                                     Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 579)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
IMAGE:2975883 3' similar to SW:1132_HUMAN Q14627 INTERLEUKIN-13
RECEPTOR ALPHA-2 CHAIN PRECURSOR ;, MRNA sequence.
AW629184
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-remail.nih.gov
This clone is available royalty-free through LLNL; contact the
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40UP from Gibco
High quality sequence stop: 284.

Location/Qualifiers
1.579
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/db_mrmAGE:2975883"
/clone=lib="Soares_NFL_T_GBC_S1"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
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/clone="IndexDisplaying the property of the pr
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NATional Cancer Institute, Cancer Genome Anatomy Project (CGAP), Unpublished (1997)
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Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.
219 CGTTTCTGGCTACCATTTGGTTTCATCTTAATATTAGTTATTTGTAACCGGTCTGCTT 160
                                                                                                                                                                                                                159 TIGCGTAAGCCAAACACCTACCCAAAAATGATTCCAGAATTTTTTCTGTGATACATGAAGA 100
                                                                                                                                                                                                                                                                                                                              Ph.D., M. Fatima
                                                                                                              ttgtataagcaaagggctttactgaaaacgat-----ctttcatacaaaaaagaagt
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Pred. No. 1.2e-38;
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74.8%;
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:2715060"
/clone=lib="Nat_CGAP_Sub3"
/lab_host="DH10B (Life Technologies)"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The
NCI_CGAP_Sub3 library is a subtracted library derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

The sequence contained an oligo-dT track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. CDNA Library Preparation: M.B. Soares Lab Clone distribution: NCI-CGAP Clone distribution information can be found through the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 29-0CT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 517)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AW136614 15-05-0-01.sl NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2715080 3', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                     663
                                                                                                                                                                                                                                                                                                                                                                                                                             237 GACCTATCGAAGAAACTTTGCTACGTTTCTGGCTACCATTTGGTTTCATCTTAATATA 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           776
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                                                                                                                                                                                                                                                                                               ATAGTTAAAACCTTTGCCGCCAGTCTATCTTACTTTTACTCGGGAGAGTTCATGTGAAATT
                                                                  gaattcacagaggatggtactacttgggtgactaccacagttgagaatgagatacaaatc
                                                                                                                                                    acaagaacatcaaatgaaagccaaaaattatgctttttggtaagaagtaaagtgaatatt
                                                                                                                                                                                                                                                                                                                                                                                     gacatatggaaggaaaccttagtattttcttgataccatttgcttttgtctcaatattt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gttttggtaataacttgcctgcttttgtataagcaaagggctttactgaaaacgat----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177 GTTATATTTGTAACCGGTCTGCTTTTGCGTAAGCCAAACACCTACCCAAAATGATTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720 ---ctttcatacaaaaaaaaagaagtcttttctcatcaagacacattctgttgactcagtaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  117 GAATTTTTCTGTGANACATGAAGACTTTCCATATCAAGAGACATGGTATTGACTCAACAG
                                         367 aacctgaaatggaacatgcctaaaggacccattccagccaaatgtttcatttatgaaatt
                                                                                                                                                                                                                                                         357 TTGAAAACAACAAATGAAACCCGACAATTATGCTTTGTAGTAAGAAGCAAAGTGAATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            777 ctttcagtcttatggccagatgttaaatatgagtcttattaaactgaagcttttc 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Seg primer: M13 Forward
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Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
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3;

Gaps

12;

0; Mismatches 123; Indels

Matches 400; Conservative

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307 atagttamacctatgccaccagactaccttagtcttactgtgamagamitcagaggmant 366

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1 (Dases 1 to 365)
S. Adams, M.D., Kerlavage, A.R., Fletschmann, R.D., Fuldner, R.A., Bult
C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D., White
C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D., White
O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C., Clayton, R.A.,
Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D., Fitzgerald
L.M., Fitzhugh, W.M., Fritchman, J.L., Geoghagen, N.S., Glodek, A.,
Gnehm, C.L., Hanna, M.C., Hedblom, E., Hinkle, P.S. Jr., Kelley, J.W.,
Kelley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M.,
Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M.,
Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shirley, R.,
Small, K.V., Spriggs, T.A., Utterback, T.R., Weidman, J.F., Li, Y.,
Bednarik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J.,
Dimke, D., Feng, D.-F., Ferrie, A., Fischer, C., Hastings, G.A., He, W.W.,
Hu, J.S., Greene, J.M., Gruber, J., Hudson, P., Kim, A.K., Kozak, D.L.,
Wei, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M., Dillion, P.J., Fannon
W.R., Rosen, C.A., Hasaltine, W.A., Fields, C., Fraser, C.M. and
                                                                                                                                                        365 bp mRNA linear EST 18-APR-1997
EST114178 HSC172 cells I Homo sapiens cDNA 5' end similar to ILl33
AA298563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lung; Vector: pBluescript SK-; Site_1: EcoRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of CDNA sequence Nature 377 (6547 Suppl), 3-174 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: arkerlav@tigr.org
For clone availability, additional sequence and expression
information related to this EST, please check the TIGR Human Gene
Index (http://www.tigr.org/tdb/hgi/hgi.html)
Seq primer: M13 Reverse
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostom1;
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9712 Medical Center Drive, Rockville, MD 20850 Tel: 3018699056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="ATCC (inhost):178283"
/db_xref="taxon:9606"
/clone_lib="HSC172 cells I"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 252; DB 9;
Pred. No. 8.3e-33;
                814 attaaactgaagcttttcctcaaatattgaataaa 848
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/cell_line="HSC172 (16PDL)"
/dev_stage="fetal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
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                                             /organism="Homo sapiens"
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; Site_2: XhoI"
66 c 69
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Contact: Kerlavage, AR
                                                                                                                                                                                                                                                                                                        AA298563.1 GI:1950896
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86.1%;
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Matches 290; Conserv
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                                                                                                                                                                                                                      DEFINITION
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COMMENT
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AUTHORS
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the NCI_CGAP_Subl library, which is a subtracted library derived from BI. BI constitutes a mixture of 21 normalized or subtracted NCI_CGAP_Libraries: NCI_CGAP_CO10, NCI_CGAP_ET22, NCI_CGAP_ET28; NCI_CGAP_ET412, NCI_CGAP_ET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3,
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Pred. No. 1.2e-34;
0; Mismatches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84 9
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102 c
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ilarity 73.6%;
Conservative
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Matches 379;
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/organism="Homo sapiens"

/db_xref="taxon:9606"

/clone_lib-"NIH_MGC_68"

/clone_lib-"NIH_MGC_68"

/tissue_type="large cell carcinoma"

/lab_host="Diga" lung; Vector: pcWV-SPORT6; Site_l: NotI;

/note="Organ: lung; Vector: pcWV-SPORT6; Site_l: NotI;

Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.

Sebnologies insert size 1.8 kb. Library constructed by Life

Pechnologies
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                                      tactggtatgagggcttggaccattcagcagagtgtactgattacatcaaggttaatgga
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xol5912.x1 NCI_CGAP_Ut2 Homo sapiens cDNA clone IMAGE:2704102 3'
Similar to SW:I132_HUMAN Q14627 INTERLEUKIN-13 RECEPTOR ALPHA-2
AW336406.1 GI:6568795
EST.
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Email: cgapbs-rémail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 506)
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                  375 CAAAATATAGGATGCAGATTTCCCTATTTGGAGGCATCAGACTATACAAGATTTCTATAC 434
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/db_xref="taxon:9606"
/clone="IMAGE:2704D102"
/clone_lib="NCT_CGAP_Ut2"
/tissue_type-"moderately-differentiated endometrial
adenocarcinoma, 3 pooled tumors"
aattcagaggaaattaacctgaaatggaacatgcctaaagga---cccattccagccaaa
                                                                                                                                                                                                     181 aaaaatatgggatgcaggtttccctatttggagtcatcagactata-aagatttctaca-
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                                                                                                                                                  5,
/lab_host="DH10B"
//note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: Sal1;
Site_2: Not1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.85 kb. Life Technologies catalog #:
11539-012"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 479)
NCI/NINDS-GRAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI/NINDS-GRAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
Unpublished (1998)
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                                                                                                                      Length 506;
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                                                                                                                      Score 233.8; DE
Pred. No. 8e-30;
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AI358911.1 GI:4110532
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IMAGE:1523637 3' similar to SW:1132_HUMAN Q14627 INTERLEUKIN-13
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cDNA Library Preparation: M. Bento Soares, Ph.D., M. Bonaldo, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. cDNA Library by: Washington University Genome Seq Clone distribution: NCI-CGAP clone distribution inffound through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/lmage.html
Insert Length: 1039 Std Error: 0.00
Seq primer: -40UP from Gibco
High quality sequence stop: 324.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 231.4; DB 9;
Pred. No. 2.1e-29;
0; Mismatches 112;
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79 q 157 t
                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tch 26.4%;
al Similarity 73.7%;
351; Conservative
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98 c
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26

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675 bp mRNA linear EST 14-DEC-2000

601658166R1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3876064 3',

BE964459
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Location/Qualifiers

Location/Qualifiers

1 .675

Ab xref="taxon:9606"

Ab xref="taxon:9606"

Aclone="IMAGE:387606"

/ itsue_type="large cell carcinoma"

/ itsue_
                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 675)

8 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)

10 not 3, 2000 this sequence version replaced gi:10575164.

Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTP/DTP/Gazdar
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
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Best Local Similarity 70.4%;
Matches 472; Conservative
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BE964459/c
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                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                          Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: capabs-refmail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 609 Std Error: 0.00
Seq primer: -4oml3 Fwd. Err from Amersham
High quality sequence stop: 220.
                                                                                                                                           tccagccaaatgtttcatttatgaaattgaattcacagaggatggtactacttgggtgac 458
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Best Local Similarity 74.8%; Pred. No. 3.6e-29;
Matches 332; Conservative 0; Mismatches 100; Indels
RECEPTOR ALPHA-2 CHAIN PRECURSOR ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. 443
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:1523637"
/clone="IMAGE:1523637"
/lab_hogt="DH10B"
                                              AA909507.1 GI:3048912
                                                                                                                            Homo sapiens
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US-08-609-572-3
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2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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US-08-846-344-1

US-08-846-344-1

US-08-846-344-1

US-08-232-463-14

US-08-232-463-14

US-08-232-463-14

US-08-233-463-14

US-08-233-463-14

US-08-93-81-3

US-08-93-81-3

US-08-93-81-3

US-08-93-81-3

US-08-93-81-3

US-08-93-81-3

US-08-98-416-191

US-08-998-416-191

US-08-998-416-191

US-08-998-416-191

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Maximum Match 100%
Listing first 45 summaries
                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                         IDENTITY_NUC Gapop 10.0 , Gapext 1.0
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Score 533.6;
Pred. No. 4.46
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Patent No. 6214559
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APPLICANT: COllins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
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                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/841,751
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Pred. No. 4.4e-126;
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               APPLICANT: Whitters, Matthew
APPLICANT: WOOD CLIVE
TITLE OF INVENTION: CYTOKINE RECEPTOR
NUMBER OF SEQUENCES: 9
                                                                                                        ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: G152, TELECOMMUNICATION INFORMATION: TELECOMMUNICATION INFORMATION: G17) 876-581 INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS: LENGTH: 1369 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/609,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Brown, Scott A. REGISTRATION NUMBER: 32,724
Neben, Tamlyn
Whitters, Matthew
Wood, Clive
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78.9%;
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MEDIUM TYPE: Floppy disk
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NAME: Brown, Scott A.
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Best Local Similarity 78.99
Matches 677; Conservative
                                                                                       CORRESPONDENCE ADDRESS:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: COllins, Mary
APPLICANT: Collins, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whitters, Lori
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/846,340 FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3, Application US/08846340 Patent No. 6248714
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NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
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PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cambridge
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                                                                                                                                                                                                                                                                                     Length 1369;
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Pred. No. 4.4e-126;
0; Mismatches 169;
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                  60.8%;
78.9%;
             TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEO ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                            LENGTH: 1369 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                  Query Match 60.8
Best Local Similarity 78.9
Matches 677; Conservative
                                                                                                                                                                                                   CDS
103..1245
                                                                                                                                                                                                ; NAME/KEY:
; LOCATION:
US-08-846-340-3
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STREET: 87
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771 cagtaactttcagtcttatggccagatgttaaatatgagtcttattaaactgaagctttt 830
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,344
FILING DATE:
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                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: COLLIAS, MATY
APPLICANT: COLLIAS, LOTI
APPLICANT: Pitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Genetics Institute, Inc.
STREET: 87 CambridgePark Drive
CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
REPERENCE/DOCKET NUMBER: G1526
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPHONE: (617) 876-5851
INFORMATION FOR SEC IN NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                          Sequence 3, Application US/08846344 Patent No. 6268480
                                                                                 1337 TTGCGAAAAAAAAAA 1354
                                                      831 cctcaaatattgaataaa 848
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TYPE: nucleic acid
STRANDEDNESS: double
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Matches 677; Conservative
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103..1245
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                                                                                                                                                                                                                                                                                                                                                                                            USA
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HYPOTHETICAL: N
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; LOCATION:
US-08-846-344-3
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APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Nhitters, Mathew
APPLICANT: Whitters, Mathew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Genetics Institute, Inc.
87 CambridgePark Drive
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STATE: MA
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1415 ATTTCTTGACATAGAGCCAG----CCAGCAGGAGTCATATTAAACTCAA-TTTCTCTTAA 1469
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1175 ATATATATTGTGCAGATGATGGAATTTGGAGCGAATGGAGTGAAGAGGAATGTTGGGAAG 1234
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                                                                                                                                                                                                                        ttc----atacaaaaaaaaagaagtctttctcatcaagacacattctgttgactcagta
                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/841,751
                                                                                                                                                                                                                                                                                                                                                                             US-08-841,751-1
Sequence 1, Application US/08841751
Sequence 1, Application US/08841751
Sequence 1, Application US/08841751
Sequence 1, Application US/08841751
Septicant: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Wold, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Genetics Institute,
87 CambridgePark Drive
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: ATTORNEY/AGENT INFORMATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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EDNESS: double
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STRANDEDNESS:
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STREET: 8'
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LOCATION:
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           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATA:
FILING DATE:
                                                                                                                                    CLASSIFICATION: 530
ATORNEY/AGENT INFORMATION:
NAME: Brown, Scott a.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G1528
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
                                                                                                                                                                                                                                                                                                                                        double
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256..1404
                                                                                                                                                                                                                                                                                                                       nucleic acid
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                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KEY:
; LOCATION:
US-08-609-572-1
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Best Local Similarity 71.5%; Pred. No. 6.3e-104;
Matches 631; Conservative 0; Mismatches 241; Indels
                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,340
                                                                       APPLICANT: Whitters, Matthew APPLICANT: Whitters, Matthew APPLICANT: Wood, Clive TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN UNBER OF SEQUENCES: 9 CORRESPONDENCE ADDRESS:
                                                                                                                                       ...ureSSEE: Genetics Institute, Inc. STREET: 87 CambridgePark Drive CITY: Cambridge STATE: MA COUNTRY: USA
                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEL,

RAME: Brown, C.C. REGISTRATION NUMBER: 32, 1526
REFERENCE/DOCKET NUMBER: GI526
TELECOMUNICATION INFORMATION:
TELEPHONE: (617) 876-5851
; INPORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                               E: Floppy disk
IBM PC compatible
                                                         Neben, Tamlyn
Whitters, Matthew
                   Donaldson, Debra
Fitz, Lori
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MEDIUM TYPE: Floppy
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MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
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Best Local Similarity
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US-08-846-340-1
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Pred. No. 6.3e-104;
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                                                     Query Match 50.8%;
Bost Local Similarity 71.5%;
Matches 631; Conservative
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US-08-846-340-1
US-08-841-751-1
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Length 1525

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Neben, Tamlyn
APPLICANT: Whitters, Mathew
APPLICANT: Whitters, Mathew
TITLE OF INVENTION: CTTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Genetics Institute, Inc. STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08846344
Patent No. 6268480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/609,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02140
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                                                                                                                                                                                                                                            Length 1525;
                                                                                                                                                                                                                                            Score 446; DB 4; I
Pred. No. 6.3e-104;
                                                                                                                                                                                                                                                                    0; Mismatches 241;
                                                                                                                                                                                                                                              Score 446;
                              TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-824
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                            50.8%;
71.5%;
NAME: Brown, Scott A. REGISTRATION NUMBER: 32, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                    Matches 631; Conservative
                                                                                                                                                                                 CDS
256..1404
                                                                                                                                            MOLECULE TYPE: CDNA HYPOTHETICAL: NO
                                                                                                                                   linear
                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                NAME/KEY:
LOCATION:
                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                         US-08-846-344-1
                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                          Best Local
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STATE: CA
COUNTRY: USA
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                                                                                                                              836 aatattgaataaatcttattttaaaangaaaaaaaaaaa 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30472/114 IMMU
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STREET: 1800 Diagonal Road, Suite 500
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: EP 91 114 300.6 FILING DATE: 26-AUG-1991 ATTORNEY/AGENT INFORMATION: MAME: BENTY, Stephen A. REGISTRATION NUMBER: 29,768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/232,46
                                                                                                                                                                                          RESULT 9
US-08-232-463-14/C
; Sequence 14, Application US/08232463
; Patent No. 5670367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/POCKET NUMBER: 30.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
TELERAX: (703)683-4109
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INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pairs
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MEDIUM TYPE: Floppy disk
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STRANDEDNESS: single
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IMMEDIATE SOURCE:
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Best Local Similarity
Matches 8; Conserv
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               join(294..772, 1003..2098, 2941..3213, 5032..6600,
6934..6951)
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GENERAL INFORMATION:
APPLICANT: Baker, Barbara J
APPLICANT: Whitham, Steven A
TITLE OF INVENTION: Plant Virus Resistance Gene and Methods
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                              4.6%; Score 40; DB 1; Length 7400;
43.9%; Pred. No. 0.42;
tive 0; Mismatches 220; Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/WS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SSEE: Margaret A. Connor, USDA-ARS: 800 Buchanan Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2755 CGACATAAGGGAAGGGGGCAAGAATAAGTTTC 2786
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NAME: COGNOC, MATGATEL A
REGISTRATION NUMBER: 3004
REFERENCE/DOCKET NUMBER: 0094
TELECOMMUNICATION INFORMATION:
TELEPHONE: (510) 559-6077
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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                                                                                                                               Matches 172; Conservative
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                                                                                                               Similarity
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STREET: 80
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US-08-261-663A-1
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PCT-US95-07754A-1
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STATE:
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2635 TAACATCAGTATTTCTTAAAAAGAATCCAATTAACATTGTATCTTAAACTTTGGTATTGT 2694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         333 ccttagtcttactgtgaagaattcagaggaaattaacctgaaatggaacatgcctaaagg 392
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6934..6951)
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Patcht No. 5736358
GENERAL INPORMATION:
APPLICANT: FASEL, NICOLAS JOSEPH
APPLICANT: REYMOND, CHRISTOPHE DOMINIQUE
TITLE OF INVENTION: DICTYOSTELID EXPRESSION VECTOR AND
TITLE OF INVENTION: METHOD FOR EXPRESSING A DESIRED PROTEIN
NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
4.6%; Score 40; DB 5; Length 7400;
Best Local Similarity 43.9%; Pred. No. 0.42;
Matches 172; Conservative 0; Mismatches 220; Indels
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                                                                                          ORGANISM: Nicotiana glutinosa
TISSUE TYPE: leaf
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
ORIGINAL SOURCE:
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2099..2940
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773..1002
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2360 TIAGGGAGAACTICTAGITITGCCAATAGAAAIGTICTTCCATTGAATAAAAGTTATT 2419
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Pred. No. 0.82;
0; Mismatches 97; Indels 0
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Ginger R.
REGISTRATION NUMBER: 33,055
REFRENCE/DOCKET NUMBER: P1130p1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-3216
                                          US/08/933,821
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APPLICANT: Godowski, Paul J.
APPLICANT: Godowski, Paul J.
TITLE OF INVENTION: Tie Ligands
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
WinPatin (Genentech)
               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/933
FILIND DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Ginger R.
REGISTRATION NUMBER: 33,055
REFERENCE/DOCKET NUMBER: P113
TELECHONE: 650/252-981
TELEPHONE: 650/252-981
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 3355 base pairs
TYPE: NUCLEIC Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08960507
Patent No. 6057435
                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.48;
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CITY: South San Francisco
STATE: California
COUNTRY: USA
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Best Local Similarity 49.7
Matches 96; Conservative
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US-08-933-821-3
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0.51;
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47.0%; Pred. No. 0.51;
tive 0; Mismatches 132; Indels
                                       700 KOPPERS BUILDING, 436 SEVENTH AVENUE
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MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                     CITY: PITYBURGH
STATE: PENNSTLVANIA
COUNTY: UNITED STATES OF AMERICA
ZIP: 15219-1818
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" FLOPY DISK
COMPUTER: Midwest Micro 486-50
OPERATING SYSTEM: DOS
SOFTWARE: WORDERFECT 6.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/451,405A
FILING DATE: 26-MAY-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: US/08/5,273
FILING DATE: 15-JAN-1993
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
TEMBORY
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Sequence 3, Application US/08933821
Patent No. 5972338
SERERAL INFORMATION:
APPLICANT: Godowski, Paul J.
TITLE OF INVENTION:
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
STREET: 1 DNA WAY
                      THE WEBB LAW FIRM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1 DNA WAY
CITY: South San Francisco
STATE: California
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Best Local Similarity 47.09
Matches 117; Conservative
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: NUCLEIC ACID
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US-08-451-405A-2
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MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFRATING SYSTEM: Geneticch)
CURRENT APPLICATION DATA:
                                                                                                                                                                                           4.4%; Score 38.4; DB
49.7%; Pred. No. 0.82;
tive 0; Mismatches
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Patent No. 6350450
GENERAL INFORMATION:
APPLICANT: GOGGWSKI, Paul J.
APPLICANT: GLOGGWSKI, Paul J.
TITLE OF INVENTION: Tie Ligands
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 1 DNA WAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Dreger, Ginger R. REGISTRATION NUMBER: 33,055 REFERENCE/DOCKET NUMBER: PLITELECOMMUNICATION INFORMATION: 650/225-3216
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TELEPAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 3355 base pairs
TYPE: Nucleic Acid
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 1 DNA Way
CITY: South San Francisco
STATE: California
COUNTRY: USA
TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS: LENGTH: 3355 base pairs TYPE: Nucleic Acid STRANDEDNESS: Single
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Best Local Similarity 49.7'
Matches 96; Conservative
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 49.7%; Pred. No. 0.82;
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Matches 96; Conservative
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Search completed: September 23, 2002, 13:36:07 Job time: 7465 sec

Query Match

4.4%; Score 38.4; DB 4; Length 3355;

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Canine IL-13R

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Canine IL-13K/19G-Canine IL-13R/19G-Canine IL-13R/19G-Canine IL-13R/19G-Canine IL-13R/19G-Canine IL-13R/19G-Canine IL-13Ralpha Human interleukin-Nucleotide sequenc

Human cytokine/pep Homo sapiens cDNA CDNA encoding the CDNA encoding IL-1 Human Interleukin-Human interleukin-Human interleukin-Human interleukin-Human interleukin-

Human Zcytor2 cyto Celebus macaque Zc Human Zcytor2 cyto

Perfect score:

Title:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Minimum DB Maximum DB

Database

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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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AAV22701
AAD22980
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AAA27911
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AAA27912
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AAV04131
AAV04075
AAV02295
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 09-APR-2001; 2001WO-US11498
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                                                                                                                                                                                                                                                                                                                1: SIDSI/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*
2: SIDSI/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
3: SIDSI/gcgdata/geneseqf.embl/NA1981.DAT:*
4: SIDSI/gcgdata/geneseqf.embl/NA1981.DAT:*
5: SIDSI/gcgdata/geneseqf.embl/NA1981.DAT:*
5: SIDSI/gcgdata/geneseqf.embl/NA1981.DAT:*
7: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1981.DAT:*
7: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1980.DAT:*
8: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1980.DAT:*
9: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1990.DAT:*
11: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1990.DAT:*
12: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1991.DAT:*
13: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1991.DAT:*
14: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1991.DAT:*
15: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1991.DAT:*
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17: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1995.DAT:*
18: SIDSI/gcgdata/geneseqf/geneseqn-embl/NA1995.DAT:*
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        GenCore version
Copyright (c) 1993 - 2000
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Maximum Match 100%
Listing first 45 summaries
                                               - nucleic search, using sw model
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07-APR-2000; 2000US-195659P. 07-APR-2000; 2000US-195874P.

WPI; 2001-657172/75. P-PSDB; AAU69134. McCall CA, Tang L; (HESK-) HESKA CORP

Canine interleukin Canine interleukin

AASS9961 AASS9962 AASS9963 AASS9966 AASS9967 AASS9964 AASS9965

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Canine interleukin

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Result . 9

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Interleukin-13 bin Tumour suppressor Human immune syste

Human interleukin

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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the mucleic acids encoding them, antibodies raised against them, the mucleic acids encoding them, antibodies and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IGC for treating canine and/or light chain) and/or canine IL-13R mediated the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
                                                 protein useful for regulating
                                                                                  1mmune response of an animal and for developing regulatory compounds
                          Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 878 BP; 298 A; 141 C; 165 G; 273 T; 1 other;
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The invention concerns an isolated canine protein, preferably canine interjection of graph of
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Canine interleukin 13 receptor cDNA nCaIL-13Ralpha2 878 complement
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              Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA encoding a protein of the invention.
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LL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC;
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                                                                present sequence encodes a protein of the invention.
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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601 ggtgacatatggaaggaaaccttagtatttttttttgataccatttgcttttgtctcaata

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                                                                                                                                                                                                                                                  Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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                                                                        07-APR-2000; 2000US-195659P. 07-APR-2000; 2000US-195874P.
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
                                                                                                                                                                                                                                                                    Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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Claim 19; Page 178; 221pp; English.
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ID AAS59965 standard; cDNA;
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Sequence 1158
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                   Query Match
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (19G) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, tusion proteins between the 1gG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA conding a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel isolated canine protein, preferably canine immunoglobulin {\tt G} protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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Pred. No. 6.4e-167;
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                                                                                                                                                                                                                                                                                                                                                               Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                                                                                                                                                                                                                                                                                                                             Canine IL-13R extracellular domain cDNA nCaIL-13Ralpha2 954
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IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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Pred. No. 5e-133;
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Best Local Similarity 99.7%;
Matches 619; Conservative
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Sequence 1686 BP; 513 A; 384 C; 382 G; 407 T; 0 other;
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                                                                                                                                                                             Novel isolated canine protein, preferably canine immunoglobulin G
protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds
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99.7%; Pred. No. 5e-133;
iive 0; Mismatches 2
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                                                                 09-APR-2001; 2001WO-US11498.
                                                                                    07-APR-2000; 2000US-195659P. 07-APR-2000; 2000US-195874P.
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619; Conservative
                                                                                                                                                           WPI; 2001-657172/75
                                                                                                                                       McCall CA, Tang L;
                                                                                                                    (HESK-) HESKA CORP.
         Canis familiaris.
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, tusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IGG (heavy and/or laight chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene
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2000US-195659P. 2000US-195874P.

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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Raipha or IL-13. The regulators are useful for treating canine IGG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA encoding a protein of the invention.
                                                                                                                              Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds .
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                        Canine IL-13R/IgG-Fc fusion protein cDNA nCall-13Ralpha2-Fc-B8 1683
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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AAS59977 standard; cDNA; 1686
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (19G) protein or canine interleukini 3 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the 19G and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine 19G (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention care useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA encoding a protein of the invention.
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Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds
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Pred. No. 5.7e-133;
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                                                          Claim 37; Page 212-213; 221pp; English.
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                                                                                                                                                                                                                                                                                     Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                              AAS59974 standard; cDNA; 1692
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P-PSDB; AAU69140.
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Q	514	
Qy	241	tgtgttaatgggtcatcagaatcccagcctatcagacccagctattttatttttcagctt 300
QQ	574	
Οy	301	caaaatatagttaaacctatgccaccagactaccttagtcttactggaagaattcagag 360
QQ	634	
Οy	361	
qq	694	gaaattaacctgaaatggaacatgcctaaaggacccattccagccaaatgtttcatttat 753
Qy	421	gaaattgaattcacagaggatggtactacttgggtgactaccacagttgagaatgagata 480
QΩ	754	
Οy	481	caaatcacaagaacatcaaatgaaagccaaaattatgctttttggtaagaagtaaagtg 540
qq	814	caaatcacaagaacatcaaatgaaagccaaaattatgctttttggtaagaagtaaagtg 873
Οy	541	
qq	874	aatatttattgctcagatggaatctggagtgagtggatgatgaatga
Οy	601	ggtgacatatggaaggaaacc 621
QQ	934	

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AF448818 matsculu

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AF4255 Sequence 1

AL121878 Human DNA

AC10326 Rattus no

AL65293 Mus muscu

AF561437 Oncorhync

AL649181 Plasmodiu

AK201385 Plasmodiu

AK201385 Plasmodiu

AK21504 Sequence

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AR003544 Oryza sat

AE001367 Plasmodiu
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LGYLSLQWQPPLFPDNFKECTIEYELKYRNIDSENWKTITKNLHYKDGFDLNKGIEA
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GVHFDTNYQLFYWYEGLDHASECTDYIKVNGKNWGCRFPYLESSDYKDFYILVNGSSE
SQPIRPSYFIFOLQUIVTKPWPPDYLSLTVKNSEEINLKWNWFKGPIPAKCFIYEIEFT
EDGTTWYTTVENEIQITRTSNESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDI
WKETLVFFLIPFAFVSIFVLVITCLLLYRQRALLKTIFFTKKEVFSHQDTFC"
                                                                                                                                                                                                                                       mRNA , linear MAM 16-OCT-2001 receptor alpha chain 2 (IL13Ra2)
                                                                                                                                                                                                                                                                                                                                                               Molecular cloning of canine IL-13 receptor alpha chain (alphal and alpha2) cDNAs and detection of corresponding mRNAs in canine
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Submitted (18-OCT-2000) Allergy and Immunology, Heska Corporation,
1613 Prospect Parkway, Fort Collins, CO 80525, USA
Location/Qualifiers
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Canis.
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184. .1344
/gene="IL13Ra2"
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/procein_id="AAL14887.1"
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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    /organism="Canis familiaris"</db_xref="taxon:9615"</li>

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/gene="IL13Ra2"
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MKETLVFFLIPFARYSIFVLVITCLLLYRQRALLKTIFHTKKEVFSHQDTFC"

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Mammalla; Eutherla; Carnivora; Fissipedla; Canldae;
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg
receptors
Patent: WO 0177332-A 60 18-OCT-2001;
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al Similarity 100.0%; Score 877; DB 6; Le
al Similarity 100.0%; Pred. No. 1.6e-166;
878; Conservative 0; Mismatches 0;
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/organism="Canis familiaris"
/db_xref="taxon:9615"
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Location/Qualiflers
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae,
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Mccall, C.A. and Tang, L.
Compositions and methods related to canine igg and
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Patent: WO 0177332-A 62 18-OCT-2001;
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AX280327
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Heska Corporation (US)
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       Score 765; DB 6; Le Pred. No. 5.1e-144;
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Patent: WO 0177332-A 63 18-OCT-2001;
Heska Corporation (US)
Location/Qualifiers
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Heska Corporation (US)
Location/Qualifiers
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Corporation (US)
Location/Qualifiers
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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red. No. 5e-144;
Mismatches 0; Indels
\label{eq:mccall} \mbox{Mccall}(C.A. \mbox{ and Tang,L.} \\ \mbox{Compositions and methods related to canine igg}
                                                    DNA
                                                                                                                                                                                                   /organism="Canis familiaris"
/db_xref="taxon:9615"
224 c 201 g 380 t
                                                                                                                                                                 Patent: WO 0177332-A 64 18-OCT-2001
                                                 AX280329 1158 bp
Sequence 64 from Patent WO0177332.
AX280329
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Pred. No.
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Location/Qualifiers
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Canis familiaris
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SNESOKLCFLVRSEVNNIYCSDDGIWSEMSDBQCWKGDIWKET"
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la; Canidae;
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; Fissipedia;
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Pred. No. 1.8e-114;
0; Mismatches 2;
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Sequence 68 from Patent WO0177332.
AX280333
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/organism="Canis famil
/db_xref="taxon:9615"
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Mammalia; Eutheria; Carnivora;
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//db_xref="G1:16607715"
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PPQLDEDGSYFLYSKLKSVDKSRWQGGDPFTCAVMHFTLQNHYTDLSLSHSPGK"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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Heska Corporation (US)
Location/Qualifiers
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Mammalia, Eutheria, Carnivora, Fissipedia, Canidae,
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and
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/db_xrefu"taxon:9615"
192 c 162 g 329 t
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AX280335.1 GI:16607713
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Location/Qualifiers
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Euthería; Carnívora; Fissipedia; Canidae;
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Pred. No. 1.6e-114;
; Mismatches 2;
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/organism-"Canis familiaris"
/db_xref-"taxon:9615"
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Sequence 73 from Patent WO0177332.
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TIEYELKYRIDSENWKTITRKNLHYROGFDLMKGIEAKITHLLAPQGTNGSEYRSSW
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AECTOYIKVNGKNAGCRPPYLESSDYRDFYICVNGSSESQPIRPSYFIFOLQUIVKPM
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/protein_id="CAD10587.1"
/db_xref="G1:16607724"
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Mccall,C.A. and Tang,L.
Compositions and methods related
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/note="unnamed protein
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and canine il-13
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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Matches 619; Conservative
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Pred. No. 1.6e-114;
                                         /organism="Canis familiaris"
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Patent: WO 0177332-A 82 18-OCT-2001;
Heska Corporation (US)
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
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US-08-442-281-13
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Maximum Match 100%
Listing first 45 summaries

    protein search, using sw model

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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0 seq length: 2000000000
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Match 1
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Maximum DB
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                                                                                                                                                                                                                                                                     Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPERTING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 70.5%; Score 1503; DB 1; Best Local Similarity 72.9%; Pred. No. 2.4e-138; Matches 272; Conservative 42; Mismatches 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: COLLINS, MARY
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, LOTI
APPLICANT: Mittz, LOTI
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CTYOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
US-08-442-281-6
US-08-939-727-6
US-08-442-282-7
US-08-442-281-7
US-08-939-727-7
US-08-939-727-7
US-08-939-727-7
US-08-421-822-3
US-08-421-822-3
US-08-442-281-8
US-08-442-281-8
US-08-939-727-8
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SER: GI5268
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08609572
Patent No. 5710023
GENERAL INFORMATION:
APPLICANT: Collins, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: GI52
TELECOMUNICATION INFORMATION:
TELEPHONE: (617) 498-824
TELEPHONE: (617) 476-5851
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : 380 amino acids
amino acid
GY: linear
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; MOLECULE TYPE: protein
US-08-609-572-4
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1 MAFIHLDVGFLYTLLVCTAFG-SMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD 59

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Sequence Seguence Sequence Sequence

US-08-442-282-6

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                                                                                                                                                                                                                                                                 120 SSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDH 179
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                                                                                                                                                                                                                                                                                                                                                                                                    240 PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNE 299
                                                                                                                                                             60 NFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVR 119
                                           Gaps
                                                                                                       1 MAFIHLDVGFLYTLLVCTAFG-SMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD 59
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  Length 380;
                                         57; Indels
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,340
; Score 1503; DB 4;
; Pred. No. 2.4e-138;
42; Mismatches 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Genetics Institute, Inc.
STREET: 87 CambridgePark Drive
CITY: Cambridge
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Brown, Scott A. REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: GIT
TELECOMMUNICATION INFORMATION:
70.5%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
ATTORNEY/AGENT INFORMATION:
Query Match
Best Local Similarity 72.99
Matches 272; Conservative
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APPLICATION NUMBER:
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STATE: MA
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NAME: Brown, Scott A.
REGISTRATION UNBER: 32,724
REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
                                 08/609,572
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                                                                                                                                                                                                                                                                                                                            70.5%;
72.9%;
                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 380 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 72.9%
Matches 272; Conservative
                                                                                                                                                                                                                                                          , MOLECULE TYPE: protein US-08-846-344-4
                  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
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COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP 239
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300 SQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKG-DIWKETLVFFLIPFAFVSIFVLVITC 358
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                                                                                                                                                                                                 Length 380;
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                                                                                                                                                                                           70.5%; Score 1503; DB 4; 72.9%; Pred. No. 2.4e-138; iive 42; Mismatches 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Collins, Mary
APPLICANT: Collins, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Genetics Institute, Inc. STREET: 87 CambridgePark Drive CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,344
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPATING SYSTEM: PC-DOS/MS-DOS
: LLEFAX: (617) 498-8224
: TELEFAX: (617) 876-5851
: INFORMATION FOR SEQ. ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 380 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08846344 Patent No. 6268480 GENERAL INFORMATION:
                                                                                                                                                                                             Query Match 70.5
Best Local Similarity 72.9
Matches 272; Conservative
                                                                                                                           ; MOLECULE TYPE: protein US-08-846-340-4
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                                                                                                                                                                                                                                                   SAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP 239
                                                                                                                                                                                                                                                                                                                       240 PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNE 299
                                          Gaps
                                                                            1 MAFIHLDVGFLYTLLVCTAFG-SMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD 59
                                                                                               ;
                                        Indels
; Score 1503; DB 4;
; Pred. No. 2.4e-138;
42; Mismatches 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESSONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
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FKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRS 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 QKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59.6%; Score 1271.5; DB 4; Length 57.2%; Pred. No. 8.9e-116; tive 71; Mismatches 88; Indels
                                                                                                         COMPUTER: IN PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/841,751
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 LYKQRALLKTIFHT - - KKEVFSHQDTFC 386
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REGISTRATION NUMBER: 32,724
REFERENCE/COCKET NUMBER: GI5268
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-5631
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 383 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/08846340
Patent No. 6248714
GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Brown, Scott A
                                                                                                   Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 57.24
Matches 222; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-841-751-2
                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
  Cambridge
                                                        02140
                    STATE: M
COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 FKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRS 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88; Indels
                                  OPERATING SYSTEM: PC_DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 59.6%; Score 1271.5; DB 1 Best Local Similarity 57.2%; Pred. No. 8.9e-116; Matches 222; Conservative 71; Mismatches 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application US/08841751
Patent No. 6214559
GENERAL INFORMATION
APPLICANT: Collins, Mary
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Whood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 LYKQRALLKTIFHT -- KKEVFSHQDTFC 386
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NAME: BROWN, SCOTE A.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 383 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Genetics Institute,
87 CambridgePark Drive
                COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-
Floppy disk
                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-609-572-2
                                                                                                                 FILING DATE:
CLASSIFICATION: 530
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56 FKGCTLEYELKYRNVDSDSWKTIITRNLIYKDGFDLNKGIEGKIRTHLSEHCTNGSEVQS 115
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 SWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 AECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPP 240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 59.6%; Score 1271.5; DB 4 Best Local Similarity 57.2%; Pred. No. 8.9e-116; Matches 222; Conservative 71; Mismatches 88;
                                                                                                  APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whitters, Matthew
APPLICANT: Whole, Tamlyn
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                     3: Genetics Institute, Inc.
87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/846,344 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
                                         Sequence 2, Application US/08846344 Patent No. 6268480 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383 amino acids
amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: protein US-08-846-344-2
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                               02140
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                                                                                                                                                                                                                                                                                                                                                                      STATE: M
COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 AECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPP 240
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| MAFVH--IRCLCFILLCTITGYSL---EIKVNPPQDFEILDPGLLGYLYLQWKPPVVIEK 55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 59.6%; Score 1271.5; DB 4; Best Local Similarity 57.2%; Pred. No. 8.9e-116; Matches 222; Conservative 71; Mismatches 88;
                APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
UMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                         E: Genetics Institute, Inc.
87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 LYKQRALLKTIFHT -- KKEVFSHQDTFC 386
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REGISTRAILON NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 383 amino acids
amino acid
Neben, Tamlyn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: protein US-08-846-340-2
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                                                                                                                                                  CITY: Cambridge STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                   COUNTRY: USA
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                                                                                                                         ADDRESSEE:
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LSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNESQK 302
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               142 MDCVYYNWQ------YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               132 LTCTTNTTEDNYSRLRSYQVSLHCTWLVGTDAPEDTQYFLYYRYG--SWTEECQEYSKDT 189
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                                                                                     L------CFLV------RSKVNIYC-SDDGIWSEWSDEQCWKGDIWKETLV
                                                                                                                                                                                              341 FFLIPFAFVSIFVL-VITCLLLYKQRALLKTIFHTK-----KEVFSHQD 383
                                                                                                                                                                                                                                                                                                              Sequence 14, Application US/07757390
Patent No. 5453491
GENERAL INFORMATION
GENERAL INFORMATION:
APPLICANT: Takatsu, Kiyoshi
APPLICANT: Takagi, Satoshi
APPLICANT: Takagi, Satoshi
APPLICANT: Murata, Yoshiyuki
TITLE OF INVENTION: Human And Murine Interleukin-5 Receptor NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie & Edmonds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 396;
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/757,390
FILING DATE: 19910910
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.7%; Score 313; DB 1;
28.9%; Pred. No. 2.4e-22;
Live 62; Mismatches 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1155 Avenue of the Americas
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: New COUNTRY: U.S.A.
COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
AMDIUM TYPE: LIBM PC COMPATIBLE
COMPATIBLE FORM:
PC-DOS/MS-DX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFRENCE/DOCKET NUMBER: 7005-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: peptide US-07-757-390-14
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Best Local Similarity
Matches 103; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                             US-07-757-390-14
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296 EDLCFFVRCKVNIYCADDGIWSEWSEEECWEGYTGPDSKIIFIVPVCLFFIFLLLLLLLLI 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 --FSHFGDKQDKKIAP-----ETRRSIEVPLNERICLOVGSQCSTNESEKPSILVE 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 TTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECT 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70 LKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLL----PAQC-TNGSEVRSSWAE 124
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 LWALLLCAGGGGGGGGAAPTETQPPVTNLSVSVENLCTVIWTWNPP--EGASSNCSLWY- 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DYIKVNGKNMGCRFPY -- LESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/969,125B
FILING DATE: 12-No. 6143871-1997
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                APPLICANT: BONNEFOY, JEAN-YVES
APPLICANT: BONNEFOY, JEAN-FRANCOIS
TITLE OF INVENTION: SUBSTANCES AND THEIR USES
TOWNER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14.9%; Score 318.5; DB 4;
25.5%; Pred. No. 7.8e-23;
iive 64; Mismatches 176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 9625899.1
FILING DATE: 13-DEC-196
ATTORNEY/AGENT INFORMATION:
NAME: WILSON, MARY J.
REGISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 1430-179
TELEPHONE: (703) 816-4000
TELEFRAX: (703) 816-4100
                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ) MOLECULE TYPE: protein
) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
US-08-969-125-9
                                                           361 LYKORALLKTIFHT -- KKEVFSHODTFC 386
                                                                                       Sequence 9, Application US/08969125B Patent No. 6143871 GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 427 amino acids TYPE: amino acid
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Best Local Similarity 25.5%
Matches 105; Conservative
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US-08-969-125-9
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132 LTCTINTTEDNYSRLRSYQVSLHCTWLVGTDAPEDTQYFLYYRYG--SWTEECQEYSKDT 189
  -----YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                                                                                        248 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                     190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
                                                                                                                             190 LGRNIACWFPRTFILSKGRDWLAVLVNGSSKHSAIRPFDQLFALHAIDQINPP--LNVTA 247
                                                                                                                                                                                                                248 EIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII----DDLSKY 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22 LLPDEKISLLPPVNFTIKVTG-LAQVLLQWKPN--PDQEQRNVNLEYQVKINAPKEDDYE 78
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                                                                                                                                                                                                                                                             304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                                                                                                                                                                      305 DVQVRAAVSSMCREAGLWSEWSQPIYVGNDEHKPLREWFVIVIMATICFILLILSLI 361
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Takatsu, Kiyoshi
APPLICANT: Takagi, Satoshi
APPLICANT: Takagi, Satoshi
APPLICANT: Muzdta, Yoshiyuki
TITLE OF INVENTION: Human And Murine Interleukin-5 Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 396;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 313; DB 1;
Pred. No. 2.4e-22;
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1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/442, 28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/757,390
FILING DATE: 10-SEP-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14, Application US/08442281 Patent No. 5807991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-
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TELEPHONE: 212 790-9090
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TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 14:
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28.98;
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REGISTRATION NUMBER: 18, R
REFERENCE/DOCKET NUMBER:
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US-08-442-281-14
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COMPUTER READABLE FORM:
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Best Local Similarity
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: U.S.A.
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    MDCVYYNWQ-
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                          K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                           248 EIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII---DDLSKY 304
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                                                                                                                                                                        304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                                                                                 NGKNMGCRFP - - YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV
                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Takatsu, Kiyoshi
APPLICANT: Takatsu, Akira
APPLICANT: Takagi, Satoshi
APPLICANT: Murata, Yoshiyuki
APPLICANT: Murata, Yoshiyuki
TITLE OF INVENTION: Human And Murine Interleukin-5 Receptor
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 396;
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/442,282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Pennie & Edmonds
STREET: 1155 Avenue of the Americas
CITY: New York
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/757,390
FILING DATE: 10-SEP-1991
ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                        Sequence 14, Application US/08442282 Patent No. 5760204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Floppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 18,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 70
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 212 869864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
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Best Local Similarity 28.9%
Matches 103; Conservative
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TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
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                                                                                                                                                                                                                                              190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
                                                                                                                                                                                                                                                                                    190 LGRNIACWFPRTFILSKGRDWLAVLVNGSSKHSAIRPFDQLFALHAIDQINPP--LNVTA 247
                                                                                                                                                                                                                                                                                                                               248 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                                                                                                                                                                                                                                                      MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13, Application US/07757390
Patent No. 5453491
GENERAL INFORMATION:
APPLICANT: Takatsu, Kiyoshi
APPLICANT: Tominaga, Akira
APPLICANT: Tominaga, Akira
APPLICANT: Takagi, Satoshi
APPLICANT: Murata, Yoshiyuki
TITLE OF INVENTION: Human And Murine Interleukin-5 Receptor
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 420;
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/757,390
FILING DATE: 19910910
CLASSIFICATION: 530
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Pred. No. 3.3e-22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC Compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 7005
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
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TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
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28.6%;
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Best Local Similarity
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US-07-757-390-13
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TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
                         142 MDCVYYNWQ-----YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                         190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
                                                                                                                                                                                         248 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRISNESQKL 303
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                                                                                                                                                                                                                                                                                                                                                    305 DVQVRAAVSSMCREAGLWSEWSQPIYVGNDEHKPLREWFVIVIMATICFILLILSLI 361
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Patent No. 5916767
GENERAL INFORMATION:
APPLICANT: Takatu, Kiyoshi
APPLICANT: Tokaqi, Satoshi
APPLICANT: Tukaqi, Satoshi
APPLICANT: Murata, Yoshiyuki
TTLE OF INFORTION: Human And Murine Interleukin-5 Receptor
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
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Live 62; Mismatches 156; Indels
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/939,727
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1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/757,390
FILING DATE: 10-SEP-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/POCKET NUMBER: 700
TELECOMMUNICATION: TELEPHONE: 212 790-9090
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TELEX: 6641 PENNIE
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
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Best Local Similarity 28.9
* Matches 103; Conservative
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US-08-939-727-14
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                                                                                                                                                                                                                                                                                              248 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                82 TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
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                                                            MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                                                                                                                                                                                             304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPPAFVSIFVLVITCLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 13, Application US/08442282
Patent No. 5760204
GENERAL INFORMATION:
APPLICANT: Takatsu, Kiyoshi
APPLICANT: Tominaga, Akira
APPLICANT: Takagi, Satoshi
APPLICANT: Takagi, Satoshi
APPLICANT: Murata, Yoshiyuki
TITLE OF INVENTION: Human And Murine Interleukin-5 Receptor
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
  63; Mismatches 156; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
GURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/442,282
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APPLICATION NUMBER: 07/757,390
FILING DATE: 10-SEP-1991
ATTORNEY/AGENT INFORMATION:
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REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 70
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
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COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 420 amino acids
Matches 102; Conservative
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                                                                                                                                                                                                                                                                           132 LTCTTNTTEDNYSRLRSYQVSLHCTWLVGTDAPEDTQYFLYYRYG--SWTEECQEYSKDT 189
                                                                                                                                                                                                                                                                                                                    190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
                                                                                                                                                                                                                                                                                                                                           K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                                                                                                                                                                                                                                                                                                                                     EIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII---DDLSKY 304
                                       Gaps
                                                                                                  22 LLPDEKISLLPPVNFTIKVTG-LAQVLLQWRPN--PDQEQRNVNLEYQVKINAPKEDDYE 78
                                                                            23 MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36;
  Length 420;
14.6%; Score 312; DB 1; Length 42 28.6%; Pred. No. 3.3e-22; ive 63; Mismatches 156; Indels
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                Similarity 28.6
                                       102;
Query Match
Best Local $
                                       Matches
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Database

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// Anote="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and coloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies. Contact: Fremp Liang Life Contrologies. Contact: Fremp Liang Life Contrologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 Http://fulllength.invitrogen.com URL: 172 201 g 285 t 1 others
AW236406 xo15q12.x
AA158911 qy19c05.x
AA909507 ollcd11.s
BEG19361 601473366
BED96449 601658166
R52795 y99f10.r1
BI462644 603203069
BG190222 RST937062
BG213456 RST33062
BG213456 RST324750
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BEP598964 602270160
BF53126 UI R-C3-s
AM001800 ws05c01.x
R52799 RPCI-23-1
AA21043 vy75h06.r
AL106627 Drosophil
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1 (bases 1 to 954)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Unpublished (2001)

Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Bmail: seqreffgenoscope.cns.fr. Web: www.genoscope.cns.fr.
Location/Qualifiers
1. 954
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CNS014FQ
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AA298563 EST114178
AM13614 UI-H-B11-
BE443844 261485 MA
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Listing first 45 summaries
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BASE COUNT

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346.2 320.2 310.2 291 286.6

641 509.4 491.4 437.6 387.8

Score

Result o S us-09-828-995b-60.rst

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                       954;
                       Length
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84.0%;
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RESULT

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vector. Library was normalized. Library was constructed
by Life Technologies. Contact: Feng Liang Life
Technologies, a division of Invitrogen 9800 Medical Center
Drive Rockville, Maryland 20850, USA Fax: (1) 301 610
8371 Email: filang@ilfetech.com URL:
http://fulllength.invitrogen.com"
/ Rock of the pchyperime of the pch
AL562513 LTI_NFL003_NBC3 Homo sapiens cDNA clone CS0DC012YF21 3
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Li,M.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
Contact: Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqreféquencope.cns.fr, Neb: www.genoscope.cns.fr.
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Best Local Similarity 81.5%; Pred. No. 3.1e-101;
Matches 747; Conservative 6; Mismatches 161; Indels
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                                                                                                                                                                 AL562513.1 GI:12911007
                                                       prime, mRNA sequence. AL562513
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Eukaryota: Metazoa: Chordata; Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 683)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                           388 CGGGAGAGTICATGTGAAATTAAGCTGAAATGGAGCATACCTTTGGGACCTATTCCAGCA 329
                                                                                                                                                                                                                                                                          268 GTTGAAAATGAAACATACACCTTGAAAACAACAAAATGAAACCGGACAATTATGCTTTGTA 209
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Contact: Robert Strausberg, Ph.D.

Email: capabb:-femail.nih.gov

Tissue Procurement: DCTD/DTP

CDNA Library Preparation: CLONETECH Laboratories, Inc.

CDNA Library Arrayed by: The I.M. AG.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can h
                                                         aaagatttctacatctgtgttaatgggtcatcagaatcccagcctatcagacccagctat
                            508 AAAGATWWCTATAWAAAAAATAATGGATCATCAGAGAACAAGCCTATCAGATCCAGTTAT
                                                                                                                            922 gigaagaaiicagaggaaaiiaaccigaaaiggaacaigcciaaaggacccaiiccagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLCAM1659 row: b column: 20
High quality sequence stop: 683.
Location/Qualifiers
1. c683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="adenocarcinoma"
/lab_host="DH10B (T1 phage-resistant)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE:4807603"
/clone_lib="NIH_MGC_60"
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AUTHORS
TITLE
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/note="Organ: prostate; Vector: pDNR-LIB (Clontech); Site_1: SfiI (ggccgctcggcc); Site_2: SfiI (ggccattatggcc); Double-stranded cDNA was prepared from cell line RNA. 5, and 3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-CACGCCATTATGCCC3' and 3' adaptor sequence: 5'-CACGCCATTATGCCC3' and 3' adaptor sequence: 5'-ATTCTAGAGGCCGATGATGCCT3' and 3' adaptor sequence: 5'-ATTCTAGAGCCGATGATGCCT3' and 1' Average insert size 1.5 kb (range 0.9-4.0 kb). 14/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304 ATGGGTTTGATCTTAACAAGGGCATTGAAGCGAAGATACACACGCTTTTACCATGGCAAT
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                                                                                                                                                                                                                                                                                                                                      Length 683;
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Pred. No. 1.7e-78;
....+rhes 96;
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85.4%;
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/note=*Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI; /note=*Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: ECORV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT prinmed and directionally cloned (EcoRV site is destroyed upon directionally cloned (EcoRV site is destroyed upon Coloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BI828427 658 bp mRNA linear EST 04-OCT-2001 603078385F1 NIH_MGC_119 Homo saplens CDNA clone IMAGE:5170268 5',
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Primates; Catarrhini; Hominidae; Homo.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoston
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 658)
NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                          746
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587
                                                                                                                                                                                                                                                                                                                                                          647
                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.lln.gov
Plate: LLAM11423 row: i column: 21
                                                                                                                                                                                                                                                                                                       gacatcaccacaaggaaatcgggaaactaaaattcaagatatggactgtgtatattacaa
                                                                                                                                       468 GATATCACCACAAGGAATTCCAGAAACTAAAGTTCAGGATATGGATTGCGTATATTACAA
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/clone_lib="NIH_MGC_119"
/tissue_type="medulla"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"/db_xref="taxon:9606"
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Location/Qualifiers
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BI828427.1 GI:15939977
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TITLE
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;
                                                                                                                                                                                                                                                                                         Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
Contact: Robert Strausberg, Ph.D.
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
CDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL)
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10732 row: 1 column: 02
                                                                                                                                                                   Euteleostomi;
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                                                                                                                                                                                                          1 (bases 1 to 743)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                             Chordata, Craniata, Vertebrata, Eutele
Primates, Catarrhini, Hominidae, Homo.
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Pred. No. 2.1e-75;
0; Mismatches 102; Indels
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84.5%;
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  mRNA sequence.
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// ACCE="Organ: pooled; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (fetal lung NbHL19W, testis NHT, and B-cell NCL_CGAP_GCBI) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hypridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 297480-392087, 682632-687239, 726408-728711 and 729096-731399. Subtraction by Bento Soares and M. Fatima Bonaldo. " a 133 c 117 g 221 t
                                                   /clone_lib="Soares_NFL_T_GBC_S1"
/lab_host="DH10B"
                         /organism="Homo sapiens
                                               /clone="IMAGE:2348766"
                                  /db_xref="taxon:9606
  Location/Qualifiers
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Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 882 Std Error: 0.00
Seq primer: -400P from Gibco
High quality sequence stop: 468.
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 676)
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                                               ggaaaaaatatgggatgcaggtttccctatttggagtcatcagactataaagatttctac 813
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Score 387.8; DB 9;
Pred. No. 1.7e-57;
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76.58;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/do_xref="taxon:9606"
/do_xref="taxon:9606"
/clone="IMAGE:3876064"
/clone=Lib="NHL WGC_68"
/tissue=Lype="large cell carcinoma"
/tissue=Lype="large cell carcinoma"
/tissue=Lype="large cell carcinoma"
/tab_nost="Dig Npage-resistant"
/note="Organ: lung; Vector: pCWV-SPORT6; Site_1: NotI;
Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT.
Site_2: sal1; cloned unidirectionally. Primer: Oligo dT.
Perhologies.
                                                                                                                                                                                                                                                             Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: capabs-rémail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC. clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lnl.gov
Plate: LLAM9636 row: d column: 17
High quality sequence stort: 26
High quality sequence stort: 26
Location/Qualifiers
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Pred. No. 7.4e-51;
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601475992F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3878831 5', mRNA sequence.
BF788633
BF788633.1 GI:10209831
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP/Gazdar
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC. clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9643 row: g column: 24
High quality sequence stop: 575.
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Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 715)
                                                     cattccagccaa-atgtttcatttatgaaattgaattcacagaggatggtactacttggg 1030
                                                                                                                                                                                                                                                          tga-ctaccacagttgagaatgagatacaaatcacaagaacatcaaatgaaagccaaaaa 1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1264 ttgtataagcaaagggctttactgaaaacgat-----ctttcatacaaaaaaagaagt 1316
                                                                                                                                                                                                                                                                                                                                                                 165 GTTTCTGGCTACCATTTGGTGTCATCTTAATATTAGTTATTATTATTTGTAACCGGTCCGCTAT 106
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
TACTITIACTCGGGAGAGTTCATGTGAAATTAAGCTGAAATGGAGCATACCTTTGGGACC 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105 TIGCGTAAGCCAAACACCTACCCAAAAATGATICCAGAATTTTTTCTGTGATACATGAAGA 46
                                                                                   1205 ttttcttgataccatttgcttttgtctcaatatttgtttttgtataacttgcctgct-t
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/clone_lib="NH_MGC_68"
/tissue_type="large cell carcinoma"
/lab_host="DH108 (phage-resistant)"
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/db_xref="taxon:9606"
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154 c 1
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mRNA linear EST 11-DEC-2000 sapiens CDNA clone IMAGE:4212574
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NIH-MGC http://mgc.nci.nih.gov/.
NAtional Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: David N. Louis, M.D.
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                                                                                                                                                                                                                                                                                                   1 GCAATATTTACTCTGTTCTTGGAAACCTGGCATAGGTGTACTTCTTGATACCAATTACAA
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                       Length
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              USA
                                                                                               1. .445
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="WAGE resequences, MAGC"
/note="Vector: pBluescriptsKm"
77 c 88 g 143 t
              20850,
                                                                                                                                                                                                                      Score 320.2; DB 9;
Pred. No. 8.7e-46;
0; Mismatches 78;
              Ð
The Institute for Genomic Research 9712 Medical Center Dr., Rockville, Tel: 301 838 3528
Fax: 301 838 0208
Email: johnq@tigr.org
Plate: 62
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602069493F1 NCI_CGAP_Brn64 Homo
5', mRNA sequence.
BF525412
BF525412.1 GI:11612773
EST.
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Best Local Similarity 82.5%;
Matches 367; Conservative
                                                                             Seq primer: Reverse
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AUTHORS
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                                       8;
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EST366403 MAGE resequences, MAGC Homo sapiens cDNA, mRNA sequence.
AW954333
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and
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                              aaataccgaaacattgatagtgaaaactggaagaccatcattaccaagaatctacattac 453
                                        Gaps
                                                                                       64
                                                                             ctggcaatatttagtctgctcttggaaacctggcatgggtgtccattttgataccaatta
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             425 ATTICTATACTITGCIGITACACIGGAICATCAGAGACAAGCCTAICAGAICCAGITAI
                                                                                                                                                                   gcacaatgcacaaatggatca----gaagttagaagttcatgggcagaaactacttattg
                                       20;
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Hegde, P., Qi, R., Abernathy, K., Dharap, S., Gaspard, R.,
J.E., Saeed, A.I., Sharov, V., Lee, N.H., Yeatman, T.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Assessment of gene expression patterns in a model of metastasis using a 19,200 element CDNA microarray (Unpublished (2000) Contact: John Quackenbush
              Length
                                       Indels
            Score 346.2; DB 10;
Pred. No. 2.4e-50;
0; Mismatches 133;
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al Similarity 77.5%;
526; Conservative
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COMMENT
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CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9783 row: i column: 23
High quality sequence stop: 677.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         533 CTTTTGCGTAAGCCAAACACCTACCCAAAATGATTCCAGAATTTTTCTGTGATACATGA 592
                                                                                                                                                                                                                                                                                                                                                                                             784 ttggagtcatcagactataaagatttctacatctgtgtttaatgggtcatcagaatcccag 843
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                                                                                                                            1. .867
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                     Query Match
21.3%;
Best Local Similarity 74.7%;
Matches 486; Conservative
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/cloue_lib="Soares_NFL_T_GBC_SI"
/cloue_lib="Soares_NFL_T_GBC_SI"
/lab_host="DH10B"
/note="Organ: pooled; Vector: pT7T3D-Pac (Pharmacia) with
a modified polylinker; Site_1: Not I; Site_2: Eco RI;
Equal amounts of plasmid DNA from three normalized
libraries (fetal lung NBH119W, testis NHT, and B-cell
NCI_CGAP_GCB1) were mixed, and ss circles were made in
vitro. Following HAP purification, this DNA was used as
tracer in a subtractive hybridization reaction. The driver
was PCR-amplified CDNAs from pools of 5,000 clones made
from the same 3 libraries. The pools consisted of
I.M.A.G.E. clones 297480-302087, 682632-687239,
726408-72871, and 729096-731399. Subtraction by Bento
Soares and M. Fatima Bonaldo. "
3 l09 c 107 g 186 t
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                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
(bases 1 to 579)
NCI-CGAP http://www.ncbi.nlm.nlh.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40UP from Gibco
High quality sequence stop: 284.
Location/Qualifiers
1. 579
AW629184 1579 bp mRNA linear EST 31-MAR-;
h152002.x1 Soares_NFL_T_GBC_S1 Homo sapiens CDNA clone
IMAGE:2975883 3' similar to SW:I132_HUMAN Q14627 INTERLEUKIN-13
RECEPTOR ALPHA-2 CHAIN PRECURSOR; ; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ggacccattccagccaaatgtttcatttatgaaattgaattcacagaggatggtactact 1026
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2975883"
                                                                                                                               AW629184.1 GI:7375974
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ACCESSION VERSION KEYWORDS SOURCE ORGANISM

AUTHORS TITLE

REFERENCE

JOURNAL COMMENT

FEATURES

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BE289033 649 bp mRNA linear EST 26-OCT-2000 601091625F1 NCI_CGAP_Mam5 Mus musculus cDNA clone IMAGE:3486223 5',
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
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Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphreys
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Tnoyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov.a.column: 08
                                                                                                                          aacctgaaatggaacatgcctaaaggacccattccagccaaatgttcatttatgaaatt 1002
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                                                              1 (bases 1 to 649)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
    Gaps
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  123;
    Mismatches
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Location/Qualifiers
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    Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T 3/]; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized, and was constructed by Bento Soares and M-Fatims Bonaldo." 4 others
                                                                                                                                                                                                                                                                                                                                                                                                                             BF591502 537 bp mRNA linear EST 30-MAR-2001 nab99a12.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:3275807 3' similar to SW:1132_HUMAN Q14627 INTERLEUKIN-13 RECEPTOR ALPHA-2 CHAIN PRECURSOR; mRNA sequence.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 537)
NCI-GGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                      1317 cttttctcatcaagacacattctgttgactcagtaactttcagtcttatggccagatgtt 1376
                                                                                                                          ttgtataagcaaagggctttactgaaaacgat-----ctttcatacaaaaaaagaagt 1316
  279 AGTGAGTGGAGTGATAAACAATGCTGGGAAGGTGAAGACCTATCGAAGAAAACTTTGCTA 220
                                                                                                                                                                159 TIGCGTAAGCCAAACACCTACCCAAAAATGATTCCAGAATTTTTCTGTGATACATGAAGA 100
                                                                                                                                                                                                                                   99 CTITCCATATCAAGAGACATGGTATTGACTCAACAGTTTCCAGTC--ATGGCCAAATGTT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs remail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10; Length 537;
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/clone_lib="NCI_CGAP_Brn23"
/tissue_type="glioblastoma (pooled)"
/lab_host="DH108"
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Pred. No. 5.2e-40;
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/organism="Homo sapiens"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      info@image.llnl.gov
Seg primer: -400P from Gibco
High quality sequence stop: 480.
Location/Qualifiers
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BF591502.1 GI:11683826
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AA298563.1 GI:1950896
                                 /notes Torgan mammary; Vector: PCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Robin Humphreys, NIH"
                                                                                                                                                                                                                                                                                                      218
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                                                                                                                                                     Length 649;
                                                                                                                                                 Score 271.2; DB 10; Length
Pred. No. 2.2e-37;
0; Mismatches 133; Indels
/tissue_type."tumor, gross tissue"
/dev_stage="7 months"
/lab_host="DH10B"
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                                                                                                                                                Query Match
Best Local Similarity 72.9%;
Matches 411; Conservative
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AA298563
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Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D., Fitzgerald, L.M., Fitzbugh, M.M., Fritchman, J.L., Geoghagen, N.S., Glodek, A., Gnehm, C.L., Hanna, M.C., Hedblom, E., Hinkle, P.S.Jr., Kelley, J.M., Kelley, J.C., Liu, L.I., Marmaros, S.M., Merrick, J.M., Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M., Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shriley, R., Small, K.V., Spriggs, T.A., Utterback, T.R., Weidman, J.F., Li, Y., Bednarik, D.P., Cao, L., Cepeda, M.A., Coleman, T.A., Collins, E.J., U. Dinke, D., Feng, D.-F., Ferrie, A., Fischer, C., Hastings, G.A., He, W.W., Hu, J.S., Greene, J.M., Gruber, J., Hudson, P.K., Kozak, D.L., Kunsch, C., Hungjun, J., Li, H., Melssner, P.S., Olsen, H., Raymond, L., Wei, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M., Dillion, P.J., Fannon, Wei, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M., Dillion, P.J., Fannon, Wenter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="ATCC (inhost):178283"
/db_xref="taxon:9606"
/clone_lib="HSC172 cells I"
/cell_type="fibroblast"
/cell_line="HSC172 (16PbL)"
/de_seq="fetal"
/note="Organ: lung; Vector: pBluescript SK-; Site_1: EcoRI ; Site_2: XhoI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       For clone availability, additional sequence and expression information related to this EST, please check the TIGR Human Gene Index (http://www.tigr.org/tdb/hgi.html)
Seq primer: MI3 Reverse
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Pred. No. 4e-36;
0; Mismatches 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bioinformatics
The Institute for Genomic Research
9712 Medical Center Drive, Rockville, 17e1: 3018699056
Fax: 3018699423
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                                                                                                                                                                                                                                                                                                                                                                                                            Other_ESTs: THC194124
Contact: Kerlavage, AR
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Best Local Similarity 86.3%;
Matches 303; Conservative
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3;

Gaps

12;

Length 517; Indels

us-09-828-995b-60.rst

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980 ccaaatgtttcatttatgaaattgaattcacagaggatggtactacttgggtgactacca 1039
                                                                                                                                                                                        atgaacaatgctggaaaggt---gacatatggaaggaaaccttagtattttcttgatac 1216
                                                                                                                                                                                                                                                                                                                                              catttgcttttgtctcaatatttgttttggtaataacttgcctgcttttgtataagcaaa 1276
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                                                                                                                                                                                                                                                                                                                                                                                                gggctttactgaaaacgat----ctttcatacaaaaaaagaagtctttctcatcaa 1329
                                                                                                                                                    217 CATTTGGTTTCATCTTAATATTAGTTATATTTGTAACCGGTCTGCTTTTGCGTAAGCCAA 158
                                                                                                  397 CAGTTGAAAATGAAACATACACCTTGAAAACAACAAATGAAACCCGACAATTATGCTTTG 338
                                                                                    920 ctgtgaagaattcagaggaaattaacctgaaatggaacatgcctaaaggacccattccag 979
                                                                                                                                                                                                                                                                                                                                                                                                               Score 262.6; DB 9;
Pred. No. 7.2e-36;
0; Mismatches 124;
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                                    18.1%;
73.6%;
                                  Query Match 18.19
Best Local Similarity 73.69
Matches 379; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
The sequence contained an oligo-df track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. cDNA Library Preparation: M.B. Soares Lab Clone distribution:
NCI-CGAP clone distribution information can be found through the
                              AW136614 517 bp mRNA linear EST 29-OCT-1999 UI-H-BII-aco-g-05-0-UI.sl NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2715080 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 517)
                                                                                                                                                                         NCI CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                     I.M.A.G.E. Consortium/LLNL at:
www.bio.llnl.gov/bbrp/image/image.html
Seq primer: M13 Forward
PoLYR=Yes.
                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                    AW136614.1 GI:6140747
                                                                                                                                                                                                                  Unpublished (1997)
                                                                                                                                                                                                     Tumor Gene Index
                                                                                                                            Homo sapiens
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KEYWORDS
SOURCE
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AW136614/c
LOCUS
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TITLE
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OM protein - protein search, using sw model

September 20, 2002, 11:52:21; Search time 13.4 Seconds (without alignments) 1115.354 Million cell updates/sec Run on:

US-09-828-995B-61 2132 1 MAFIHLDVGFLYTLLVCTAF......LLKTIFHTKKEVFSHQDTFC 386 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

105224 segs, 38719550 residues Searched:

105224 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Q14627 homo sapien	330 mus m	homo	homo	anu snu		meleagi	homo	_	mus	-	P40321 canis famil	P34902 mus musculu	Q95118 bos taurus	Q28172 bos taurus	rattı		Q08501 mus musculu	Q28235 cervus elap		P14787 oryctolagus	P16471 homo sapien	mus m	P40189 homo sapien	rattu	P15509 homo sapien	homo	s sns	P26951 homo sapien	Q9vwe0 drosophila		32 drosophi	Q90375 columba liv
SUMMARIES	ID	I132_HUMAN	I131_MOUSE	I131_HUMAN	IL5R_HUMAN	IL5R_MOUSE	PRLR_CHICK	PRLR_MELGA	CYRG_HUMAN	IL3B_MOUSE	CYRB_MOUSE	PRLR_COLLI	CYRG_CANFA	CYRG_MOUSE	CYRG_BOVIN	PRLR_BOVIN	PRLR_RAT	CYRB_HUMAN	PRLR_MOUSE	PRLR_CEREL	PRLR_ORENI	PRLR_RABIT	PRLR_HUMAN	IL6B_MOUSE	IL6B_HUMAN	IL6B_RAT	GMCR_HUMAN	112S_HUMAN	GHR_PIG	IL3R_HUMAN	DOME_DROME	GHR_RABIT	PTP1_DROME	GHR_COLLI
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æ	Query Match	70.	16.2	14.9		12.5				10.4						9.1					•	•	•	•		•			•	٠		•	0.9	
	Score	1503	346	318.5	313	266	256	240.5	232	221	221	217.5	216	208	199	195	194	192	189	182.5	180.5	178	172.5	154.5	150	145	144.5	139	136.5	131.5	129	127.5	127.5	126
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	P24394 homo sapien Q02092 gallus gall						P14753 mus musculu
LEPR_HUMAN LIFR_HUMAN	IL4R_HUMAN GHR_CHICK	GHR_HUMAN GHR_MOUSE	GHR_SHEEP	GHR_BOVIN	EPOR_RAT	I12B_HORSE	EPOR_MOUSE
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ALIGNMENTS

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                                                                                                                                                                                                                                                                                         SSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDH 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'Cloning and characterization of a binding subunit of the interleukin
                                                           INTERLEUKIN-13 RECEPTOR ALPHA-2 CHAIN.
EXTRACELULAR (POTENTIAL).
CYTOPLASHIC (POTENTIAL).
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1997 (Rel. 35, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Interleukin-13 receptor alpha-1 chain precursor (IL-13R-alpha-1) (IL-13RA-1) (Interleukin-13 binding protein) (NR4).
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                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE~96133964; Pubmed~8552669;
Hilton D.J., Zhang J.-G., Metcalf D., Alexander W.S., Nicola N.A.,
                                                                                                                                                                                                                            PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNE
                                                                                                                                                                                                                                                                                                                                                                                                            1 MAFIHLDVGFLYTLLVCTAFG-SMLSNAEIKVNPPQDFEIVDFGYLGYLGLGWQPPLFPD
                                                                                                                                                                                                                                                                                                                           SAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                  ;;
                                                                                                                                                                                 Length 380;
                                                                                                                                                                                                  Indels
                                                                                                                                                       3C6ACB1B5562C887 CRC64;
                                                                                                                                                                                                  57;
                                                                                                                                                                               Score 1503; DB 1;
Pred. No. 1.6e-118;
42; Mismatches 57;
                                             Signal,
         IPR003961; FN_III.
IPR003532; Hematopo_receptor_S_F2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424
         InterPro; IPR003961; FN_III.
InterPro; IPR001852; Hemalopo_receptor_
Pfam; PF00041; fn3; 1.
PROSITE; PS01356; HEMATOPO_REC_S_F2; 1.
                                                      POTENTIAL.
                                             Transmembrane; Glycoprotein;
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(Rel. 35, Last sequ
(Rel. 40, Last anno
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Chordata;
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Mammalia; Eutheria; Rodentia;
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Σ
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72.9%;
IPR002996; CR1A.
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ID 1131_MOUSE
AC 009030;
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between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
13 receptor that is also a component of the interleukin 4 receptor."; Proc. Natl. Acad. Sci. U.S.A. 93:497-501(1996).
-!- FUNCTION: BIRDS IL-13 WITH A LOW AFFINITY. TOGETHER WITH IL-4R-ALPHA CAN FORM A FUNCTIONAL RECEPTOR FOR IL-13. ALSO SERVES AS AN ALTERNATE ACCESSORY PROFIEN TO THE COMMON CYTOKINE RECEPTOR GAMMA CHAIN FOR IL-4 SIGNALING, BUT CANNOT REPLACE THE FUNCTION OF GAMMA-C IN ALLOWING ENHANCED IL-2 BINDING ACTIVITY (BY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transmembrane; Glycoprotein; Immunoglobulin domain; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 VGFLYTLLVCTAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDNFKECTIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 LGELLVLLLWTATVGQVA-AATEVQPPVTNLSVSVENLCTIIWTWSPP--EGASPNCTLR
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(POTENTIAL).
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(POTENTIAL).
                                                                                                                                                                       SUBUNIT: INTERLEUKIN-13 RECEPTOR IS A COMPLEX OF IL4R-ALPHA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16.2%; Score 346; DB 1; Length 42. 27.2%; Pred. No. 1.3e-21; ive 71; Mismatches 175; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXTRACELLULAR (POTENTIAL).
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InterPro; IPR003532; Hematopo_receptor_S_F2.
PROSITE; PS01356; HEMATOPO_REC_S_F2; 1.
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Best Local Similarity 27.2%
Matches 110; Conservative
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103
136
262
338
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424 AA;
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IL5R_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mada M., Hisano T., Kuwano M.;
SEQUENCE FROM N.A.

Nada M., Hisano T., Kuwano M.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.

LISHA CAN FORM A FUNTIONIA RECEPTOR FOR IL-13. ALSO SERVES AS AN ALTERNATE ACCESSORY PROTEIN TO THE COMMON CYTOKINE RECEPTOR GAMMA CHAIN FOR IL-4 SIGNALING, BUT CANNOT REPLACE THE FUNTION OF CHAIN FOR IL-4 SIGNALING, BUT CANNOT REPLACE THE FUNTION OF CHAIN FOR IL-4 SIGNALING, BUT CANNOT REPLACE THE FUNTION OF CHAIN FOR IL-4 SIGNALING ENHANCED IL-2 BINDING ACTIVITY.

CI-1 SUBUNIT: INTERLEUKIN-13 RECEPTOR IS A COMPLEX OF IL4R-ALPHA, AND POSSIBLY OTHER COMPONENTS.

CI-1 SUBCELLULAR LOCATION: Type Inmediate Protein.

CI-1 SISSUE SPECIFICITY: UBIQUITOUS. HIGHEST LEVELS IN HEART, LIVER, SKELETAL MUSCLE AND DANRY: LOWEST LEVELS IN BRAIN, LUNG AND KIDNEY. ALSO FOUND IN B -CELLS. T CELLES AND ENDOTHELIAL CELLS.

CI-1 SIMILARITY: CONTAINS I IMMUNOSLOBULIN-LIKE C2-TYPE DOMAIN.

CI-1 SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                      Ferrara P.; "Cloning of the human IL-13R alphal chain and reconstitution with the IL4R alpha of a functional IL-4/IL-13 receptor complex."; FEBS Lett. 401:163-166(1997).
                                                                                                                                                1131_HUMAN STANDARD; PRT; 427 AA.
P78552, 099656; 095646;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Interleukin-13 receptor alpha-1 chain precursor (IL-13R-alpha-1) (IL-
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA cloning and characterization of the human interleukin 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gauchat J.F.M., Schlagenhauf E., Feng N.P., Moser R., Yamage Jeannin P., Alouani S., Elson G., Notarangelo L.D., Wells T., Eugster H.P., Bonnefoy J.Y.;
                                                                                                                                                                                                                                                                                                                                                                                                         Miloux B., Laurent P., Bonnin O., Lupker J., Caput D., Vita
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eugster H.P., Bonnefoy J.Y.; Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-T-cell;
MEDILNE-97067184; PubMed-8910586;
Aman M.J., Tayebi N., Obiri N.I., Puri R.K., Modi W.S.,
Leonard W.G.,
                                           347 AFVSIFVLVITCLLLYKQRALLKTIF-----HTKKEVFSHQD 383
                                                               receptor alpha chain.";
J. Biol. Chem. 271:29265-29270(1996).
                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-97165986; PubMed-9013879;
                                                                                                                                                                                                                                                              IL13RAÍ OR IL13RA OR IL13R.
                                                                                                                                                                                                                                                                                Homo sapiens (Human)
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67 --FSHFGDKQDKKIAP-----ETRRSIEVPLNERICLQVGSQCSTNESEKPSILVE 115
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                                                                                                                                                                                                        Receptor; Transmembrane; Glycoprotein; Immunoglobulin domain; Signal. SIGNAL 1 \\ 21 POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 LYTLLVCTAFGSMLSN-AEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDNFKECTIEYE 69
                                                                                                                                                                                                                                            INTERLEUKIN-13 RECEPTOR ALPHA-1 CHAIN,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341 FFLIPFAFVSIFVL-VITCLLLYKQRALLKTIFHTK-----KEVFSHQD 383
                                                                                                                                                                                                                                                                  EXTRACELLULAR (POTENTIAL).
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G -> D (IN REF. 3).
5983B3E8F554107B CRC64;
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BY SIMILARITY.
N-LINKED (GLCNAC.)
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PROSITE; PS01356; HEMATOPO_REC_S_F2;
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CAA71669.1; -.
CAA70508.1; -.
AAB37127.1; -.
AAD00510.3; -.
                                                                                                              InterPro; IPR002996; CR1A.
InterPro; IPR003961; FN_III.
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               EMBL; Y09328; CAA705
EMBL; U62858; AAB371
EMBL; U81379; AAD005
HSSP; P40189; 1BQU.
MIM; 300119; --
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427 AA;
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CARBOHYD
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ILSR_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 1-335 FROM N.A. (SI FORM).
MEDLINE-92005669; PubMed-1833065;
Tavernier J., Devos R., Cornells S., Tuypens T., van der Heyden J.,
Tavernick G.;
"A human high affinity interleukin-5 receptor (IL5R) is composed of
an IL5-specific alpha chain and a beta chain shared with the receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecular basis of the membrane-anchored and two soluble isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transmembrane; Glycoprotein; Alternative splicing; Signal.
             01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Interleukin-5 receptor alpha chain precursor (IL-5R-alpha) (CD125
                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDILINE-923.72031; Pubmed-1505961;
Scott H.S., Guo X.H., Hopwood J.J., Morris C.P.;
"Structure and sequence of the human alpha-L-iduronidase gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INTERLEUKIN-5 RECEPTOR ALPHA CHAIN. EXTRACELLULAR (POTENTIAL). POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALTERNATIVE SPLICING.
TISSUE SPECIFICITY: EXPRESSED ON EOSINOPHILS AND BASOPHILS.
SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
SIMILARITY: TO IL-13 RECEPTOR ALPHA-2 CHAIN.
DATABASE: NAME-PROW; NOTE-CD guide CDw125 entry;
WWW-"http://www.ncbi.nlm.nih.gov/prow/cd/cdw125.htm".
                                                                                                                                                                                                                                                                                                                                                                                                                                    Tavernier J., Tuypens T., Plaetinck G., Verhee A., Fiers W.,
                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalla; Eutherla; Primates; Catarrhini; Hominidae; Homo.
NCBI_raxID⇒9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the human interleukin 5 receptor alpha subunit." Proc. Natl. Acad. Sci. U.S.A. 89:7041-7045(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR002996; CR1A.
InterPro; IPR003532; Hematopo_receptor_S_F2.
PROSITE; PS01356; HEMATOPO_REC_S_F2; 1.
                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE-92357767; PubMed-1495999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M96652; AAA59152.1; -.
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EMBL; M75914; AAA36110.1; --
EMBL; A26249; CAA01793.1; --
EMBL; A24587; CAA01731.1; --
EMBL; A26251; CAA01794.1; --
                                                                                                                                                                                                                                                                                                                                                Genomics 13:1311-1313(1992).
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                                                                                                                                                Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A40267; A40267. MIM; 147851; -.
                                                                                                                              ILSR.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Receptor;
                                                                                                          antigen).
ILSRA OR
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TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Devos R.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRITES---KCVTILHKGFSASVRTILQ---NDHSLLASSWASAEL-HAPPGSPGTSIVN 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142 MDCVYYNWQ-----YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190 LGRNIACWFPRTFILSKGRDWLSVLVNGSSKHSAIRPFDQLFALHAIDQINPP--LNVTA 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII---DDLSKY 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- FUNCTION: THIS IS THE RECEPTOR FOR INTERLEUKIN-5. THE ALPHA CHAIN
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          78
                                                                                                                                                                                                                                                                                                                                                                                       23 MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
NDE -> FSR (IN SOLUBLE ISOFORM S1).
HISSING (IN SOLUBLE ISOFORM S1).
N -> K (IN SOLUBLE ISOFORM S1).
N -> K (IN SOLUBLE ISOFORM S2).
HISSING (IN SOLUBLE ISOFORM S2).
HISSING (IN SOLUBLE ISOFORM S2).
HISSING (IN SOLUBLE ISOFORM S2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN IS COMMON TO THE IL-3, IL-5 AND GM-CSF RECEPTORS.
-!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- TISSUE SPECIFICITY: EXPRESSED ON EOSINOPHILS AND BASOPHILS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BINDS TO IL-5.
-!- SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN. THE BETA
                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Molecular cloning and expression of the murine interleukin-5
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                                                                                                                                                                                                                                                                                    Length 420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor alpha chain precursor (IL-5R-alpha).
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                                                                                                                                                                                                                                                                                                                                    62; Mismatches 156; Indels
                                                                                                                                                                                                                                                                                  14.7%; Score 313; DB 1; 28.9%; Pred. No. 7.7e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.1.MXY-1991 (Rel. 18, Created)
01-MAY-1991 (Rel. 18, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
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MEDLINE-91092260; PubMed=2265612;
                                                                                                                                                                                                       MW;
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                                                                                                                                                                                                                                                                                                                                  Matches 103; Conservative
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                                                                                                  333
336
333
334
420 AA;
                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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NCBI_TaxID=10090;
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      use by non-profit institutions as long as its content is in way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                          17;
 There are no restrictions on ng as its content is in no
                                                                                                                                                                                                                                                                                                                                                                                          127 YWTSPQGNRETKIQDMDCVYYN------WQY-LVCSWKPGMGVHFDTNYQLFYWYE 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                    EYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIVKPMPPDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE 290
                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                            VGFLYTLLVCTAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTI 66
                                                                                                                                                                                                                                                                                                                                                              GLDHSAECTDYIK-VNGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                             VGALATLQ-----ADLINHKKFLLLPPVNFTIKATG-LAQVLLHWDPN--PDQEQRHVDL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              291 IQITRTSNESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F-ISKIDDVS-TYSIQVRAAVSSPCRMPGRWGEWS-QPIYVGKERKSLVEWHLIVLPTAA
                                                                                                                                                                                                          (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                       INTERLEUKIN-5 RECEPTOR ALPHA CHAIN,
                                                                                                                                                                                                                                                                                          38;
                                                                                                                                                                                                                                                                     Length 415;
                                                                                                                                                                                                                                                                                        71; Mismatches 166; Indels
                                                                                                                                               EXTRACELLULAR (POTENTIAL)
POTENTIAL.
                                                                                                                                                                                                                               LINKED (GLCNAC. . .) (P
A4326D2922571C08 CRC64;
                                                                                                                                                                  CYTOPLASMIC (POTENTIAL).
BY SIMILARITY.
BY SIMILARITY.
N'LINKED (GLCNAC. . .) (
                                                                                                                                                                                                                     (GLCNAC. . .)
                                                                                                                                                                                                            (GLCNAC. .
                                                                                                                                                                                                                                                                     12.5%; Score 266; DB 1; 25.7%; Pred. No. 6.5e-15;
                                                                                                                    Receptor; Transmembrane; Glycoprotein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
Prolactin receptor precursor (PRL-R) (CPRLP).
                                                                  PIR; S12357; S12357.
MGD; MGI:96558; I155a.
InterPro; IPR002996; CRIA.
InterPro; IPR003532; Hematopo_receptor_S_F2.
PROSITE; PS01356; HEMATOPO_REC_S_F2: 1.
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 European Bioinformatics Institute.
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N-LINKED
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                                                          EMBL; D90205; BAA14231.1; -.
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                                                                                                                                                                                                                                                                                         95; Conservative
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2115
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241
415 AA;
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348 CFVLLIFSLI 357
                                                                                                                                                                                                                                                                               Local Similarity
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Q04594;
                                                                                                                                                           TRANSMEM
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                                                                                                                                                 DOMAIN
                                                                                                                              SIGNAL
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                                                                                                                                        CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 ITVTATNEIGSNS----SDPQYVDVTSIVQPGSPVNLTLETKRSANIMYLWAKWSPPLLA 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTL------LPAQ 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171 FYWYEGLDHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSE--SQPIRPSYFI 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                 Tanaka M., Maeda K., Okubo T., Nakashima K.;
"Double antenna structure of chicken prolactin receptor deduced from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LVCTAFGSMLSNAEIKVNPPQDFE---IVDPG-------YLGYLSLQWQPPLFP 58
                                                                                                                                      Biochem. Biophys. Res. Commun. 188:490-496(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CINGSEVRSSWAETTYWTSPQG-NRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
(POTENTIAL).
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(POTENTIAL).
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                                                                                                                                                                                     -:- SUBCELLULAR LOCATION: Type I membrane protein.
-:- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
-:- SIMILARITY: CONTAINS 4 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12.0%; Score 256; DB 1; Length 831; 25.4%; Pred. No. 1.1e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
PROLACTIN RECEPTOR.
EXTRACELLULAR (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Signal; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYTOPLASMIC (POTENTIAL). FIBRONECTIN TYPE-III 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FIBRONECTIN TYPE-III 1
FIBRONECTIN TYPE-III 2
FIBRONECTIN TYPE-III 3
FIBRONECTIN TYPE-III 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GLCNAC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLCNAC
                                                                                                                                                                                                                                                                                                                                                                                                                                     HSSP; P14787; IAN3.
INTERPO: PRO02996; CRIA.
INTERPO: IPR003961; FN_III.
INTERPO: IPR003528; Hematopo_receptor_L_F1.
Pfam; PF0041; fn3; 4.
PROSITE; PS01352; HEMATOPO_REC_L_F1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS01352; HEMATOPO_REC_L_F1; 1. Transmembrane; Glycoprotein;
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N-LINKED (
N-LINKED (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                             SEQUENCE FROM N.A.
STRAIN-WHITE LEGHORN; TISSUE-Kidney;
MEDLINE-93075121; Pubmed-1445292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ψ¥;
                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; D13154; BAA02439.1; -. PIR; JQ1655; JQ1655.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Receptor; Transmembrane; SIGNAL 1 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                    the cDNA sequence.";
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262
303
315
335
831 AA;
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NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24
24
24
460
460
460
123
326
336
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DISULFID
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Matches 10
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RESULT 8
CYRG_HUMAN
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266 LYSKEGEEQVYECPDY-RTAGPN-SCYFDKKHTSFWTIYNITVRATNEMGSNSSDPHY-- 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
NCBI_TaxID=9103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Ovary;
Pitts G.R., You S.K., Foster D.N., el Halawani M.E.;
Submitted (MAR.1995) to the EMBL/GenBank/DDBJ databases
-i- FUNCTION: THIS IS A RECEPTOR FOR THE ANTERIOR PITUITARY HORMONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhou J.F., Zadworny D., Guemene D., Kuhnlein U.; "Molecular cloning, tissue distribution, and expression of the prolactin receptor during various reproductive states in Meleagris
                                                                                                   276 TEDGTTWVTTTVENEIQITRTS-NESQKLCFLVRSKVNIYCSDD--GIWSEWSDEQCWK-
                                                                         229 FQLQNIVKPMPPDYLSLTVKNSEEIN-----LKWNMP-----KGPIPAKCFIYEIEF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -i- SUBCELLULAR LOCATION: Type I membrane protein.
-i- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
-i- SIMILARITY: CONTAINS 4 FIBRONECTIN TYPE III-LIKE DOMAINS.
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Receptor; Transmembrane; Glycoprotein; Signal; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CYTOPLASMIC (POTENTIAL).
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PROLACTIN RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRER_MELGA STANDARD; PRT; 831 AA. 091091; 091091; 091092; 01-NOV-1997 (Rel. 35, Created) NOV-1997 (Rel. 35, Last sequence update) 15-JUL-1999 (Rel. 38, Last sequence update) Prolactin receptor precursor (PRL-R) (TPRLR).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL, L76587; AAB01544.1; --
EMBL, U22947; AAA75038.1; --
EMBL, U22947; AAA75038.1; --
EMBL, U22944; AAA75039.1; --
HSSP, P16471; 1BP3.
InterPro; IPR002996; CRIA.
InterPro; IPR003961; FN_III.
InterPro; IPR003961; FN_III.
InterPro; IPR003528; Hematopo_receptor_L_F1.
Pfam; PF00041; fn3; 4.
SMART; SM00060; FN3; 3.
                                                                                                                                                                                                                                                                     332 -GDIWKETLVFFLIPFAFVSIFVLVITCLLLYK 363
                                                                                                                                                                                                                                                                                                      431 PNDFRVKDMIVWIVLGVLSSLICLIMSWTWVLK 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 82-121 AND 473-522 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Crania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-Kidney;
MEDLINE-97057891; PubMed-8902221;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biol. Reprod. 55:1081-1090(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gallopavo."
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DOMAIN
TRANSMEM
DOMAIN
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PRLR_MELGA
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01-JUL-1993 (Rel. 26, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Cytckine receptor common gamma chain precursor (Gamma-C) (Interleukin-2 receptor gamma chain) (IL-2R gamma chain) (P64) (CD132 antigen).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              266
                                                                                                                                                                                                                                                                                                                                                                                                                                                    56 LFPDNFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNG 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    116 SEVR----SSWAETTYWTS------PQGNRETKIQDMDCVYYNWQYLVCSWKP 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           366 WLTLDYELRLKPEEGEEWETVFVGQQTQYKMFSLNPGKKYI-----VQIHCKPDHHGSW 419
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                ----YLGYLSLQWQPP 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC...) (FOTENTIAL)
N-LINKED (GLCNAC...) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202 VQVRCMLDPGEWSE---WSSERRILISGGLSPPEKPTITK----CRSPEKETFTCWWKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GMGVHFDTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312 MGSNSSDPHY -- VDVTYIVQPDPPANVTLELK -- KPINRKPYLMLTWSPP---PLADVRSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -KCFIYEIEF-TEDGTTWVTTTVENEIQITRTS-NESQKLCFLVRSKVNIYCSDD--GIW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEĞUENCE FROM N.A., AND PARTIAL SEQUENCE.
MEDLINB-92335883; Pubhed-1611559;
Takeshita T., Asao H., Ohtani K., Ishii N., Kumaki S., Tanaka N.,
Munakata H., Nakamura M., Sugamura K.;
"Cloning of the gamma chain of the human IL-2 receptor.";
Science 257:379-382(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --SQPIRPSYFIFQLQNIVKPMPPDYLSLTVKNSEEIN-----LKWNMPKGPIPA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                        91;
                                                                                                                                                                                                                                                                                                                                                   Length 831;
                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEWSDEQCWK--GDIWKETLVFFLIPFAFVSIFVLVITCLLLYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEWSSENYIEIPNDFRVKDMIVMIVLGVLSSLICLIMSWTMVLK 463
    FIBRONECTIN TYPE-III
FIBRONECTIN TYPE-III
FIBRONECTIN TYPE-III
FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                                                                                                 11.3%; Score 240.5; DB 1; 26.2%; Pred. No. 2.2e-12;
                                                                                                                                                                                                                                                                                                                                                                                        53; Mismatches 154;
                                                                        BY SIMILARITY.

BY SIMILARITY.

N-LINKED (GLONAC.

N-LINKED (GLONAC.
                                                                                                                                                                                                                                                                                                                                                                                                                            12 YTLLVCTAFGSMLSNAEIKVNPPQDFE---IVDPG------
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                                                                                                                                                                                                                                                                                               X.
                                                                                                                                                                                                                                                                                           94394
                                                                                                                                                                                                                                                                                                                                                                                        Matches 106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
  1122
2252
3225
428
46
46
69
69
110
1112
1132
3303
315
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                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
25
228
326
326
36
75
75
75
75
79
1112
1112
1132
262
262
303
315
315
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P31785;
DOMAIN
DOMAIN
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DISULFID
                                                                                                                                                   CARBOHYD
CARBOHYD
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Immunol. 153:1310-1317(1994).
  gamma chain maps to Xq13.1 and is mutated immunodeficiency, SCIDX1.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Detection of three nonsense mutations and one missense mutation in the interleukin-2 receptor gamma chain gene in SCIDX1 that differently affect the mRNA processing."; Genomics 21:291-293(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bamborough P., Hedgecock C.J., Richards W.G.; The interleukin-2 and interleukin-2 and interleukin-8 receptors studied by molecular
                                                                                                                                                                                                                                                                                                                                                                    'Interleukin-2 receptor gamma chain: a functional component of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ishli N., Asao H., Kimura Y., Takeshita T., Nakamura M., Tsuchiya Konno T., Maeda M., Uchiyama T., Sugamura K.; Impairment of Ilgand binding and growth signaling of mutant IL-2 receptor gamma-chains in patients with X-linked severe combined immunodeficiency.";
                     MEDLINE-53293887; PubMed-8514792; Noguchi M.J.; Noguchi M., Adelstein S., Cao X., Leonard W.J.; Characterization of the human interleukin-2 receptor gamma chain
                                                                                                                                                                                                                                                   'Sharing of the interleukin-2 (IL-2) receptor gamma chain between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Interleukin-2 (IL-2) receptor gamma chain mutations in X-linked severe combined immunodeficiency disease result in the loss of high-affinity IL-2 receptor binding.";

Eur. J. Immunol. 24:475-479(1994).
                                                                                                                       Puck J.M., Deschenes S.M., Porter J.C., Dutra A.S., Brown C.J., Willard H., Henthorn P.S.;
"The interleukin-2 receptor gamma chain maps to Xq13.1 and is m in X-linked severe combined immunodeficiency, SCIDXI.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'Interleukin-2 receptor gamma chain: a functional component of
                                                                                                                                                                                                                                                                                                                MEDLINE-94090317; PubMed-8266078;
Russell S.M., Kkegan A.D., Harada N., Nakamura Y., Noguchi M.,
Leland P., Friedmann M.C., Miyajima A., Puri R.K., Paul W.E.,
Leonard W.J.;
                                                                                                                                                                                                                          Kondo M., Takeshita T., Ishii N., Nakamura M., Watanabe S.,
Arai K.-I., Sugamura K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-54375038; PubMed-8088810;
Markiewicz S., Subtil A., Dautry-Varsat A., Fischer A.,
de Saint Basile G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-94130970; PubMed-8299698;
Disanto J.P., Dautry-Varsat A., Certain S., Fischer A.,
                                                                                               SEQUENCE FROM N.A., AND VARIANTS ASP-114 AND ASN-153 MEDLINE-94004847; PubMed-8401490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARIANTS XSCID PHE-115; CYS-240 AND ILE-241
                                                                        Biol. Chem. 268:13601-13608(1993)
                                                                                                                                                                           Mol. Genet. 2:1099-1104(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTIFICATION AS A IL-7R SUBUNIT. MEDLINE-94090316; PubMed-8266077;
                                                                                                                                                                                                                                                                                                       IDENTIFICATION AS A IL-4R SUBUNIT.
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IDENTIFICATION AS A IL-4R SUBUNIT.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3D-STRUCTURE MODELING OF 57-248
                                                                                                                                                                                                                                                                 receptors for IL-2 and IL-4.";
Science 262:1874-1877(1993).
                                                                                                                                                                                                                                                                                                                                                                                            Science 262:1880-1883(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Structure 2:839-851(1994).
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"Interleukin-2 (IL-
SEQUENCE FROM N.A.
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PROBABLY ALSO THE IL-13 RECEPTORS.
-!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- DISEASE: DEFECTS IN IL2RG ARE THE FOUNDES OF A SEVERE COMBINED IMMUNODEFICIENCY, WHICH IS KNOWN AS AGAMMAGLOBULINEMIA, SWISS TYPE
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                                                                Disanto J.P., Rieux-Laucat F., Dautry-Varsat A., Fischer A., de Saint Basile G.; "Defective human interleukin 2 receptor gamma chain in an atypical chromosome-linked severe combined immunodeficiency with peripheral
                                                                                                                                                                                                                                                                                                                VARIANTS XSCID CYS-226 AND HIS-226.
MEDLINE-95397841; PubMed-7668284;
Pepper A.E., Buckley R.H., Small T.N., Puck J.M.;
"Two mutational hotspots in the interleukin-2 receptor gamma chain gene causing human X-linked severe combined immunodeficiency.";
Am. J. Hum. Genet. 57:564-571(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-98064061; PubMed-9399950;
Sharfe N., Shahar M., Roifman C.M.;
"An interleukin-2 receptor gamma chain mutation with normal thymus
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Jones A.M., Clark P.A., Katz F., Genet S., McMahon C., Alterman Cant A., Kinnon C.;
"B-cell-negative severe combined immunodeficiency associated wit common gamma chain mutation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clark P.A., Lester T., Genet S., Jones A.M., Hendriks R., Levinsky R.L., Kinnon C.; Levinsky R.L., Kinnon Complied Caution and Conformation polymorphism analysis."; Hum. Genet. 96:427-432(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIINE-97042245; Pubmed-8900089;
Stephan V., Wahn V., Le Deist F., Dirksen U., Broeker B.,
Mueller-Fleckenstein I., Horneff G., Schroten H., Fischer A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     morphology.";
J. Clin. Invest. 100:3036-3043(1997).
-1- FUNCTION: COMMON SUBUNIT FOR THE RECEPTORS FOR A VARIETY INTERLEUKINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           due to
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"Atypical X-linked severe combined immunodeficiency due spontaneous reversion of the genetic defect in T cells.
New Engl. J. Med. 335:1563-1567(1996).
                                                                                                                                                                                                                                               Proc. Natl. Acad. Sci. U.S.A. 91:9466-9470(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=95164726; PubMed=7860773;
Puck J.M., Pepper A.E., Bedard P.-M
"Female germ line mosaicism as the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clin. Invest. 95:895-899(1995).
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MEDLINE=96013903; PubMed=7557965;
                              MEDLINE-95023932; PubMed-7937790;
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                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             224 PSYFIFOLONIVKPMPPDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTED-GTTW 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283 VTTTVENEIQITRISNESQK-LCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVF 341
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198 TEQSVDYRHKFSLPSVDGQKRYTFRVRSRFNPLCGSAQHWSEWSHPIHWGSNTSKENPFL 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25 TILLT-PNGNEDITADFFLITMPIDSLSVSTLPLPEVQCFVFNVEYMNCTWNSSSEPQ-P 82
         SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
SIMILARITY: CONTAINS 1 FIBRONECTIN TYPE III-LIKE DOMAIN.
DATABASE: NAME-PROW; NOTE-CD GUIGE CD122 entry;
WWW."http://www.ncbi.nlm.nh.gov/prow/cd/cd132.htm".
DATABASE: NAME-IL2RGbase; NOTE-X.linked SCID mutation database;
WWW."http://www.nhgrl.nih.gov/DIR/GMBB/SCID,".
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01-0CT-1993 (Rel. 27, Last sequence update)

01-0CT-1993 (Rel. 27, Last sequence update)

01-0CT-1993 (Rel. 39, Last annotation update)

10-0CT-10Win-1 seceptor class II beta chain precursor (Colony stimulating factor 2 receptor, beta 2 chain).

8.0572RB2 OR AIZA OR IL3RB2 OR IL3R.

Mus musculus (Mouse).

8.0484290ta: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
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 X-LINKED SEVERE COMBINED IMMUNODEFICIENCY DISEASE (XSCID)
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InterPro; IPR003961; FN_III.
InterPro; IPR003531; Hematopo_receptor_S_F1.
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48; Mismatches
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SEQUENCE FROM N.A.
MEDLINE=90117145; PubMed=2404337;
Itoh N., Yonehara S., Schreurs J., Gorman D.M., Maruyama K., Ishil A., Yahara I., Arai K., Miyajima A.;
"Cloning of an interleukin-3 receptor gene: a member of a distinct receptor gene family.";
Science 247:324-327(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33 PPQDFEIVDPGYLGYLSLQWQPPLFPDN---FKECTIEYELKYRNIDSENWKTITTKNLH 89
                                                                                                                                                                                                     -I - FUNCTION: IN MOUSE THERE ARE TWO CLASSES OF HIGH-AFFINITY IL-3 RECEPTORS. ONE CONTAINS THIS IL-3-SPECIFIC BETA CHAIN AND THE OTHER CONTAINS THE BETA CHAIN ALSO SHARED BY HIGH-AFFINITY IL-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194 -TSNFQVN--LEPKLFLPNSIYAARVRTRLSAGSSLSGRPSRWSPEVHWDSQPGDK-AQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTVKNSEEINL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTERLEUKIN-3 RECEPTOR CLASS II BETA
                                                                                                                                                                                                                                                                                                                      -i- SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN.
-i- SUBCELLULAR LOCATION: Type I membrane protein.
-i- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.4%; Score 221; DB 1; Length 878; llarity 24.5%; Pred. No. 1e-10; Conservative 58; Mismatches 155; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8EBC9092ADC24D56 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS01355, HEMATOPO_REC_S_F1; 1.

Receptor; Transmembrane; Glycoprotein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIR; A40091; A40091.
MGD; MGI:1339760; Csf2rb2.
InterPro; IPR002996; CRIA.
InterPro; IPR002985; CYLA_receptor_2.
InterPro; IPR003961; FN_III.
InterPro; IPR003531; Hematopo_receptor_S_F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
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Σ
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                                                                                                                                                                                                                                                                                                 AND GM-CSF RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4440
462
878
49
95
264
310
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878
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878 AA;
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Best Local Similarity
Matches 86; Conserv
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RESULT 11
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                                                                                                                                                                                                                                              361 HWETQK--IPKYIDHTFQVQYKKKSESWKDSKTENLGRVNSMDLPQLEPDTSYCARVRVK 418
                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CYTOKINE RECEPTOR COMMON BETA CHAIN. EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC. . .) (POTENTIAL). (GLCNAC. . .) (POTENTIAL). (GLCNAC. . .) (POTENTIAL).
                      311 -VNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL
                                 419 PISDY---DGIWSEWSNEYTWTDWVMPTLWIVLI-----LVFLIFTLLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC. ) (PORTING SCELEEDFDC07A999 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS01355; HEMATOPO_REC_S_F1; 1.
Receptor; Transmembrane; Glycoprotein; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CYTOPLASMIC (POTENTIAL). FIBRONECTIN TYPE-III 1. FIBRONECTIN TYPE-III 2.
                                                                                                                      01-0CT-1993 (Rel. 27, Created)
01-0CT-1993 (Rel. 27, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Cytokine receptor common beta chain precursor.
CSF2RB OR CSF2RB1 OR AIC2B OR IL3RB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Muchanton i IPR00296; CTIA.
InterPro; IPR000282; Cytok_receptor_2.
InterPro; IPR003961; FN_III.
InterPro; IPR003531; Hematopo_receptor_S_F1.
                                                                                                   896 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M34397; AAA37204.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGD; MGI:1339759; Csf2rbl.
                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 463
896
241
440
49
62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00041; fn3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIR; A35782; A35782.
                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                  NCBI_TaxID=10090;
                                                                                                   CYRB_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                              P26955;
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                                                                                       CYRB_MOUSE
                                                                             RESULT
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21;

Gaps

92;

Query Match 10.4%; Score 221; DB 1; Length 896; Best Local Similarity 22.6%; Pred. No. 1e-10; Matches 90; Conservative 64; Mismatches 153; Indels

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                                                                                                             378 VQYKKKSDSWEDSKTEN-LDRAHSMDLSQLEPDTSYCARVRVKPISNYDGIWSKWSEEXT 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Cloning, expression, and mutational analysis of the pigeon prolactin
eceptor.":
                          ----NTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGM 160
                                                                                                                                                                                                                                                                                270 QTTGSVSFGLFYRPSPVAPEEKCSPVVKEPPGASVYTRYHCSLPVPEPSAHSQYTVSVKH 329
                                                                                                                                                                                                                                                                                                                                          216 SSESQPIRPSYFIFQLQNIVKPMPPDYLSLTVKNSEEINLKWNMPKGPIPAKCFI---YE 272
                                                                                                                                                                                                                                                                                                                                                                                                                             273 IEFTEDGTTWVTTTVENEIQITRTSNESQ---KLCFLVRSKVNIYCSDDGIWSEWSDEQC 329
                                                                                                                                                                                                             213 PRVRTRLYPGSSLSGRP--SRWSPEAHWDSQPGDK-AQPQNLQCFFDGIQSLHCSWEVWT 269
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Endocrinology 135:269-276(1994).
                                                                                                                                                                                                                                                                                                                                                                330 LEQGK-----FIMSYNHI--QMEPPTLNLT-KNRDSYSLHWETQK---MAYSFIEHTFQ
                                                                                -----FKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKI-----
                                                                                                                                                                                                                                                       161 GVHFDTNYQLFYWYEGLDHSAECTDYIK-VNGKNM----GCRFPYLESSDYKDFYICVNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Columbiformes; Columbidae; Columba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -:- SUBCELLULAR LOCATION: Type I membrane protein.
-:- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
-:- SIMILARITY: CONTAINS 4 FIBRONECTIN TYPE III-LIKE DOMAINS.
---LSLQWQPPLFPDN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          || | : | : | : | : | | 437 WKTDWVMPTLWIVLILVFLI---LTLLLILREGCVSVYR 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  330 WKGD----IWKETLVFFLIPFAFVSIFVLVITCLLYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR002996; CRIA.
InterPro; IPR003961; FN_III.
InterPro; IPR003528; Hematopo_receptor_L_F1.
Pfam: PF000401; fn3; 4.
SMART; SM00060; FN3; 4.
PROSITE; PS01352; HEMATOPO_REC_L_F1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Prolactin receptor precursor (PRL-R).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Cropsac;
MEDLINE=94283267; Pubmed=7516866;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Columba livia (Domestic pigeon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U07694; AAA20646.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
31 VNPPQDFEIVDPGYLGY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chen X., Horseman N.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=8932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROLACTIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P16471;
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Q90374;
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16;
                                                                                                                                                                                                                                                                                                                                                                                                                                         261 PINYTLLYSKEGEERVYECPDY-KTAGPN-SCYFDKKHTSFWTIYNITVKATNEIGSNVS 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-Spleen;
MEDLINE-95130114; PubMed-7829104;
Henthorn P.S., Somberg R.L., Fimiani V.M., Puck J.M., Patterson D.F.,
Pelsburg P.J.;
                                                                                                                                                                                                                                                                                                                                                   145 YLLAKWSPPPLADVTSNSHVYRYELRLKPEEKEEWETV---SVGVQTQYKVNR-LQAGVK 200
                                                                                                                                                                                                                                                                                                                                                                                                201 YVVQVRCVLDIGEWSEWSSERHIHIPNGESPPEKPTIIKCRSPEKETFTCWWKPGSDGGH 260
                                                                                                                                                                                                                                                                                                                                                                                                                         165 DTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVN----GSSES 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   271 YEIEF-TEDGTTWVTTTVENEIQITRTS-NESQKLCFLVRSKVNIYCSDD--GIWSEWSD 326
                                                                                                                                                                                                                                                                                                                              47 YLSLQWQPPLFPDNFKECTI-EYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKIN 105
                                                                                                                                                                                                                                                                                                                                                                           106 TLLPAQCTNGSEVRSSWAETTYWTSPQG-NRETKIQDMDCVYYNWQYLVCSWKPGMGVHF 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319 DPL----YVDVTYIVQTDPPVNVTLELKKTVNRKPYLVLTWSPP--PLADVRSGWLTLD 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          372 YELRLKPEEAEEWETIFVGOOTHYKMFSLNPGKKYI-----VOIHCKPDHHGSWSEWSL 425
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QPIRPSYFIFQLQNIVKPMPPDYLSL----TVKNSEEINLKWNMPKGPIPA-----KCFI
                                                                                                                                                  (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
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Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PFBB-1995 (Rel. 31, Created)
01-FBB-1995 (Rel. 31, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
Cytokine receptor common gamma chain precursor (Gamma-C)
(Interleukin-2 receptor gamma chain) (IL-2R gamma chain) (P64).
                                                                                                                                                                                                                                                                                                          41;
                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                        53; Mismatches 158; Indels
                       PROLACTIN RECEPTOR. EXTRACELLULAR (POTENTIAL).
                                                     CYTOPLASMIC (POTENTIAL).
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 4.
 Glycoprotein; Signal; Repeat.
                                                                                                                                                                                                                                               3B074E83CDF69EFF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalla, Eutheria, Carnivora, Fissipedia, Canidae,
                                                                                                                                                                                                                                                                                 Score 217.5; DB 1;
Pred. No. 1.8e-10;
                                                                                                               BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327 EQCWK -- GDIWKETLVFFLIPFAFVSIFVLVITCLLLYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |: : | |: : | 426 EKYLQIPTDFRIKDMVVWIIVGVLSSLICLVMSWTMVLK 464
                                                                                                                                                                (GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                              (GLCNAC.
                                                                                                                                                                                                                                     (GLCNAC
                                              POTENTIAL.
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                                                                                                                                                                                                                                                MM.
                                                                                                                                                                                                                                                                               10.2%;
                                                                                                                                                                                                                                               94507
                                                                                                                                                                                                                                                                                                        87; Conservative
 Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
             Canis familiaris (Dog)
                                                                                                                                                                                               263
304
316
336
830 AA;
                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID~9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYRG_CANFA P40321;
Receptor;
                                                                                                                                                                                                           CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                               DOMAIN
TRANSMEM
DOMAIN
DOMAIN
DOMAIN
                                                                                                                             DISULFID
                                                                                                                                                              CARBOHYD
                                                                                                                                                     CARBOHYD
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                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                               Local
                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IL2RG
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                                                                                                                                                               -:- SUBUNT: THE GAMMA CHAIN IS COMMON TO THE IL-2, IL-4, IL-7 AND PROBABLY ALSO THE IL-13 RECEPTORS.
-:- SUBCELLULAR LOCATION: TYPE I membrane protein.
-:- DISEASE: DEFECTS IN ILIZEG ARE THE CAUSE OF A CANINE X-LINKED SEVERE COMBINED IMMNODEFICIENCY.
-:- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
-:- SIMILARITY: CONTAINS I FIBRONECTIN TYPE III-LIKE DOMAIN.
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   canine X-linked
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                                                                                 Genomics 23:69-74(1994).
-!- FUNCTION: COMMON SUBUNIT FOR THE RECEPTORS FOR A VARIETY
INTERLEUKINS.
"IL-2R gamma gene microdeletion demonstrates that canine X-1 severe combined immunodeficiency is a homologue of the human
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CYTOPLASNIC (POTENTIAL).
PSTBRONECTIN TYPE-III.
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InterPro; IPR003961; FN_III.
InterPro; IPR003531; Hematopo_receptor_S_F1.
SMARY; SM000601; fn3; 1.
SMARY; SM00060; FN3; 1.
PROSITE; PS01355; HEMATOPO_REC_S_F1; 1.
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                                                                                                                                                                                                                                                                                                     MEDLINE-93277575; Pubmed-8503926; Kumaki S., Kondo M., Takeshita T., Asao H., Nakamura M., Sugamura K.; "Cloning of the mouse interleukin 2 receptor gamma chain: demonstration of functional differences between the mouse and human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
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SUBUNIT: THE GAMMA CHAIN IS COMMON TO THE IL-2, IL-4, IL-7 AND
PROBABLY ALSO THE IL-13 RECEPTORS.
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MEDLINE-93366191; Pubmed-8359699;
Kobayashi N., Nakagawa S., Minami Y., Taniguchi T., Kono T.;
"Cloning and sequencing of the cDNA encoding a mouse IL-2 receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "The murine interleukin-2 receptor gamma chain gene: organization, chromosomal localization and expression in the adult thymus."; Eur. J. Immunol. 24:3014-3018(1994).
                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus
NCBI_TaxID=10090;
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                                                                                       01-FEB-1994 (Rel. 28, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Cytokine receptor common gamma chain precursor (Gamma-C)
(Interleukin-2 receptor gamma chain) (IL-2R gamma chain) (P64).
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MEDDINE-95104285; Pubmed-7805729;
Disanto J.P., Certain S., Wilson A., Macdonald H.R., Avner P.,
Fischer A., de Saint Basile G.;
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SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
SIMILARITY: CONTAINS I FIBRONECTIN TYPE III-LIKE DOMAIN.
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                                     369 AA
                                     PRT;
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MEDLINE-93391374; Pubmed-8378320;
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J. Neurooncol. 26:231-239(1995).
                                                                         (Rel. 28, Created)
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                                     STANDARD;
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                                 CYRG_MOUSE
P34902;
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               CYRG_MOUSE
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50; Mismatches 121; Indels
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01-NOV-1997 (Rel. 35, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
Cytokine receptor common gamma chain precursor (Gamma-C)
                                                                                                                                                                                                                                                                                                 EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .) (PC
N-LINKED (GLCNAC. . .) (PC
CB2D5AB459077AC7 CRC64;
                                                                                                                                                                                                                                                                                                           POTENTIAL.
CYTOPLASMIC (POTENTIAL).
FIBRONECTIN TYPE-III.
                                                                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. .
N-LINKED (GLCNAC. .
N-LINKED (GLCNAC. .
N-LINKED (GLCNAC. .
                                                                                                                                  PIR; JN0592; JN0592.
PIR; JN0775; JN0775.
HSSP; B1785; JN0775.
HSSP; MG1-6551; ILLN.
MGD; MG1-6551; ILLN.
INTERPRO; IPR002966; CRIA.
INTERPRO; IPR003961; FN_III.
INTERPRO; IPR003531; Hematopo_receptor_S_F1.
Pfam; PF00041; fn3; 1.
SMART; SM00060; FN3; 1.
                                                                                                                                                                                                                                               PROSITE; PS01355; HEMATOPO_REC_S_F1; 1.
Receptor; Transmembrane; Glycoprotein; Signal.
SIGNAL 1 22 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          379 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335 WKETLVFF-----LIPFAFVSIFVLVITCLLLY 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 208;
                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
                                                      S75845; AAB32904.1; JOINED.
S75847; AAB32904.1; JOINED.
S75848; AAB32904.1; JOINED.
                                                                                          JOINED.
                                            JOINED
                                                                                                                                                                                                                                                                                                                                                                                                                                             MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.88;
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                                                                                                                EMBL; S75851; AAB32904.1;
EMBL; X75337; CAA53085.1;
                                 AAB32904.1;
AAB32904.1;
                                                                                          S75849; AAB32904.1;
S75850; AAB32904.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64; Conservative
                                                                                                                                                                                                                                                                                    369
263
284
369
250
72
115
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Best Local Similarity
Matches 64; Conserv
                                                                                                                                                                                                                                                                                    23
264
264
285
151
62
102
71
                                 S75852;
S75844;
         D13565;
                       L20048;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CYRG_BOVIN
Q95118;
                                                                                                                                                                                                                                                                                                            TRANSMEM
DOMAIN
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                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                   EMBL;
EMBL;
                                            EMBL;
                                                                                                     EMBL;
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                                 EMBL;
                                                         EMBL;
                                                                                           EMBL;
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222 AQKLYTFRVRSRYNPLCGSAQHWSDWSYPIHWGSNTSKENIENPENPSLFALEAVLIPLG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P14787
                                                                                                           PRLR_BOVIN
Q28172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129 TSPQGNRETK---IQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWY---EGLDHSAE 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50 STPAGTLDVSTLPLPKVQCFVFNVEYMNCTWNSSSEPQ-PNNLTLHYGYRNFNGDDKLQE 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSE--SQPIRPSYFIFQLQNIVKPMPP 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTED-GTTWVTTTVENEIQITRTSNE 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQKL-CFLVRSKVNIYCSDDGIMSEWSDEQCWKGDIWKE------TLVFFLIPFA 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109 CGHYLFSEGITSGCWFGKKEIRLYETFVVQLQDPREHRKQPKQ----MLKLQDLVIPWAP 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENLTLRNLSEFOLELSWS---NRYLDHCLEHLVQYRSDRDRSWTEQSVDHRHSFSLPSVD 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                      -1- SUBDATT: THE GAMMA CHAIN IS COMMON TO THE IL-2, IL-4, IL-7 AND PROBABLY ALSO THE IL-13 RECEPTORS.
-1- SUBCELLULAR LOCATION: Type I membrane protein.
-1- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
-1- SIMILARITY: CONTAINS 1 FIBRONECTIN TYPE III-LIKE DOMAIN.
                                                                                           SEQUENCE FROM N.A. MEDLINE-96268473; PubMed-8672241; MEDLINE-96268473; PubMed-8672241; Yoo J., Stone R.T., Solinas-Toldo S., Fries R., Beattie C.W.; "Cloning and chromosomal mapping of bovine interleukin-2 receptor gamma gene.";
                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYTOKINE RECEPTOR COMMON GAMMA CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                 FUNCTION: COMMON SUBUNIT FOR THE RECEPTORS FOR A VARIETY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32;
(Interleukin-2 receptor gamma chain) (IL-2R gamma chain) (P64).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9.3%; Score 199; DB 1; Length 379;
24.3%; Pred. No. 2.4e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50; Mismatches 130; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33CFAD9C9B032178 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC (POTENTIAL). FIBRONECTIN TYPE-III.
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N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Receptor; Transmembrane; Glycoprotein; Signal. SIGNAL 1 22 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR002996; CRIA.
InterPro; IPR003961; FN_III.
InterPro; IPR00331; Hematopo_receptor_S_F1.
Pfam; PR00041; Fn3; 1.
SMART; SM00060; FN3; 1.
PROSITE; PS01355; HEMATOPO_REC_S_F1; 1.
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                                                                                                                                                       Cell Biol. 15:453-459(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43037 MW;
                                                                                                                                                                                                                                                                                                                                                            EMBL; U33748; AAB07812.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                       Bovidae; Bovinae; Bos.
NCBI_TaxID:9913;
                       Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              379 AA;
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                                                                                                                                                                                INTERLEUKINS
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291
158
68
109
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Best Local S
Matches 68,
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TRANSMEM
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-93346019; PubMed-1338725; Scott P., Kessler M.A., Schuler L.A.; Scott P., Kessler M.A., Schuler L.A.; Scott P., Kessler M.A., Schuler L.A.; "Molecular cloning of the bovine prolactin and growth hormone receptor transcripts in fetal and utero-placental tissues."; Mol. Cell. Endocrinol. 89:47-58(1992).
-!- FUNCTION: THIS IS A RECEPTOR FOR THE ANTERIOR PITUITARY HORMONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom1;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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BY SIMILARITY.

N-LINKED (GLCNAC. ..) (POTENTIAL).

N-LINKED (GLCNAC. ..) (POTENTIAL).

7385C0D6956EE139 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- SIMILARITY: BELONGS TO THE CYTOKINE FAMILY OF RECEPTORS.
-!- SIMILARITY: CONTAINS 4 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.1%; Score 195; DB 1; Length 581; 29.6%; Pred. No. 8.8e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EXTRACELLUIAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWART; SM00060; FN3; 2.
PROSITE; PS01352; HEWATOPO_REC_L_F1; 1.
Receptor; Transmembrane; Glycoprotein; Signal; Repeat.
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348 FVSIFVLVITCLLLYKQRAL -- LKTIFHTKKEVFSHQDTF 385
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PROLACTIN RECEPTOR.
                                       282 SMGLIVSLI-CVYCWLERTMPRIPTLKNLEDLYTEYQGNF
                                                                                                                                                                                                                                                                               01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-UUL-1998 (Rel. 36, Last annotation update)
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InterPro; IPR003528; Hematopo_receptor_L_F1.
Pfam; PF00041; fn3; 2.
SMART: SM00060; FN3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31; Mismatches
                                                                                                                                                                                                                                 581
                                                                                                                                                                                                                                                                                                                                                                                      Prolactin receptor precursor (PRL-R)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65153 MW;
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Matches 71; Conservative
                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Endometrium;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9913;
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268	213 GYWSEWSPESSIQIPNDFPVKDTSMWIFVALLSAVICLIMVWAVALKGYSMVTCIL 268	qa	
360	319 GIMSEMSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360	δλ	
212	159 VKSGWFIIQYEIRLKPEKATDWETHFTLKQTQLKIFNL-YPGQKYLVQIRCKPDH 212	QQ	
318	264 IPAKCFIYEIEF-TEDGTTWVTTTVENEIQITRTSNESQKLCFLVRSKVNIYCSDD 318	δλ	
158	104 NAINQMGISSSDPLYVHVTYIVEPEPPANLTLELKHPEDRKPYLMIKWSPPTMTD 158	qq	
263	214 NGSSESQPIRPSYFIFOLQNIVKPMPPDYLSLTVKNSEEINLKWNMP-KGP 263	Qy	
103	46 CWWEDGADGGLPINYTLTYHKEGETLIHECPDY-KTGGPN-SCYFSKKHTSIWKMYVITV 103	g	

Search completed: September 20, 2002, 11:54:45 Job time: 144 sec

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1, Appli 7, Appli 1, Appli 1, Appli 1, Appli 14, Appli 14, Appli 25, Appli 25, Appli 21, Appli 25, Appli 21, Appli 25, Appli

Sequence

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Sequence 14, A sequence 14, A sequence 14, B sequence 14, B sequence 17, B sequence 25, B sequence 25, B sequence 17, Sequence 11, Sequence 11, Sequence 11, A sequence 11, A sequence 11, A sequence 11, A sequence 2, A sequence 2, A

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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,572
                                                                                                                                                                                                                                                          Sequence 3, Application US/08609572

Patent No. 5710023

GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Fitz, Lori
APPLICANT: Noben, Tamlyn
APPLICANT: When, Tamlyn
APPLICANT: When, Tamlyn
APPLICANT: Woben, Clive
TTTLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Inc.
5219739-8

US-08-525-507-4

US-08-118-319-1

US-08-525-507-7

US-08-525-507-14

US-09-135-85-4

US-09-112-096-28

US-09-112-096-28

US-09-133-086-2

US-09-354-2438-25

US-09-354-2438-25

US-09-354-2438-25

US-09-354-2438-25

US-09-354-348-25

US-08-35-836C-71

US-08-235-836C-71

US-08-477-396A-3

US-08-477-396A-3
                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 530
ATORREY/AGENT IRPORMATION:
NAME: BICOWN, SCOTE A.
REGISSTRATION UNBER: 32,724
REFRENCE/DOCKET NUMBER: G15268
TELEPHONE: (617) 498-824
TELEPHONE: (617) 496-824
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1369 base pairs
                        1631
3046
3573
3573
2639
3848
51952
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790
790
3138
3138
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5185
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STRANDEDNESS: double
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; LOCATION:
US-08-609-572-3
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                                                                             ; Search time 108.29 Seconds (without alignments) 3298.099 Million cell updates/sec
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US-08-609-572-1
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Length 1369;
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Score 842; DB 1;
Pred. No. 1.3e-206;
57.9%; Score 842;
80.6%; Pred. No. 1
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08841751
Patent No. 6214559
GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Fitz, Lori
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Mathew
APPLICANT: Whiters, Mathew
APPLICANT: Whiters, Mathew
APPLICANT: Wood, Clive
ITILE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
                                                                                                                                                                                                                                                                                                                 1397 tgaagcttttcctcaaatattgaataaa 1424
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COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/841,751
FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G152(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1369 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OSFWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: DOTAIGNO, Debra
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whitter, Matthew
APPLICANT: Whitter, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHE
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
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REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPAX: (617) 876-5821
INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS:
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STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/08846340 Patent No. 6248714 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
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Score 842; DB 4;
Pred. No. 1.3e-206;
57.9%;
80.6%;
                       Best Local Simitarity ov.v
Matches 1038; Conservative
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US-08-846-344-3
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                       15;
 Length 1369;
 Score 842; DB 4; Pred No. 1.3e-206;
                    0; Mismatches
 57.9%;
80.6%;
Query Match 57.9
Best Local Similarity 80.6
Matches 1038; Conservative
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COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Pitz, Lori
APPLICANT: Weben, Tamlyn
APPLICANT: Whiters, Matthew
APPLICANT: Wolters, Matthew
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
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STREET: 87 CambridgePark Drive
CITY: Cambridge
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CLASSIFFCATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: G1521
TELECOMUNICATION INFORMATION:
TELEPHONE: (617) 498-824
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1369 base pairs
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NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
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STRANDEDNESS: double
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Best Local Similarity, 72.5%; Pred. No. 3.7e-177;
Matches 1033; Conservative 0; Mismatches 361;
                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC -DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: CYTOKINE RECEPTOR NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                         tgaagcttttcctcaaatattgaataaa 1424
                                                                                                                                                                                                                  TGAATTTTTCTTGCGAAAAAAAAAAA 1354
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APPLICATION NUMBER: US/08/609,572
                                                                                                                                                                                                                                                                                                                                                                                                                                 3: Genetics Institute,
87 CambridgePark Drive
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NAME: Brown, Scott A.
REGISTATION UNDBER: 32,724
REFERENCE/DOCKET UNDBER: GISS
TELECOMMUNICATION INFORMATION:
TELEFAM: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                             Sequence 1, Application US/08609572 Patent No. 5710023 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
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256..1404
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; LOCATION:
US-08-609-572-1
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                           15;
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 Score 842; DB 4; I
Pred. No. 1.3e-206;
0; Mismatches 235;
57.9%;
llarity 80.6%;
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1414 AATTICTIGACATAGAGCCAG----CCAGCAGGAGTCATATAAACICAA-TITCTCTTA 1468 GGTTACACAGGGCCAGACTCAAAGATTATTTTCATAGTACCAGTTTGTCTTTTGTA 1293 1354 CICCATGIGGAICTGAACAAGAGTGTGTGCTTATGAAGATACCCTCTGTTAAACCACC tttc----atacaaaaaaaaagactctttctcatcaagacacattctgttgactcagt aactttcagtcttatggccagatgttaaatatgagtcttattaaactgaagcttttcctc COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute, Inc.
STREET: 87 CambridgePark Drive CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/841,75: NAME: Brown, Scott A.
REGISTATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G152
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1: Sequence 1, Application US/08841751 Patent No. 6214559 FILING DATE: CLASSIFICATION: PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/609, FILING DATE: ATTORNEY/AGENT INFORMATION: COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk SEQUENCE CHARACTERISTICS: LENGTH: 1525 base pairs TYPE: nucleic acid STRANDEDNESS: double TOPOLOGY: linear MOLECULE TYPE: cDNA HYPOTHETICAL: NO or Camb. CITY: Cambridge STATE: MA USA 02140 COUNTRY: ZIP: 021 US-08-841-751-1 FEATURE: 1117 1177 1234 1297 1351

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GGTTACACAGGGCCAGACTCAAAGATTATTTTCATAGTACCAGTTTGTCTTTTTATA 1293
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                   GAAATTGTGATCCGAGAAGACGATATTTCCTGGGAGTCTGCCACAGACAAAACGATATG
                                                                                                                                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08846340
Patent No. 6248714
GENERAL INFORMATION:
APPLICANT: Collins, Mary
APPLICANT: Fitz, Lori
APPLICANT: Neben, Tamlyn
APPLICANT: Whitters, Matthew
APPLICANT: Wood, Clive
TITLE OF INVENTION: CYTOKINE RECEPTOR CHP
NUMBER OF SEQUENCES: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/846,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PATENTIN Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: G15268
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEPAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1: Genetics Institute,
87 CambridgePark Drive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Brown, Scott A. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
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                                               Length 1525,
                                                                   Indels
                                              Score 727; DB 4; Le
Pred. No. 3.7e-177;
0; Mismatches 361;
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llarity 72.5%;
Conservative (
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                                                        Similarity
                                                        Best Local Simmatches 1033;
; NAME/KEY:
; LOCATION:
US-08-841-751-1
                                               Query Match
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                                                                                              1234 GGTTACACAGGCCCAGACTCAAAGATTATTTCATAGTACCAGTTTGCTTTTTTTATA
                                                gaaattaacctgaaatggaacatgcctaaaggaccattccagccaaatgttcatttat
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/846,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/08846344
Patent No. 6268480
GENERAL INFORMATION: Mary
APPLICANT: Collins, Mary
APPLICANT: Donaldson, Debra
APPLICANT: Fitz, Lori
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Whiters, Matthew
APPLICANT: Wood, Cilve
TITLE OF INVENTON: CYTOKINE RECEPTOR CHAIN
NUMBER OF SEQUENCES: 9
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STREET: 87 CambridgePark Drive
CITY: Cambridge
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CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/609,572
FILING DATE:
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                                                                                                                                                     Length 1525;
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                                                                                                                                                       ; DB 4; I
3.7e-177;
                                                                                                                                                       Score 727;
Pred. No. 3
                                                                                                                                                     50.0%;
72.5%;
         LENGTH: 1525 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                 Best Local Similarity 72.5 Matches 1033; Conservative
SEQUENCE CHARACTERISTICS:
                                                                                             CDS
256..1404
                                                          CDNA
                                           TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
                                                                                           ; NAME/KEY:
; LOCATION:
US-08-846-340-1
                                                                                                                                                       Query Match
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                                                                                gaaattaacctgaaatggaacatgcctaaaggacccattccagccaaatgtttcatttat
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           tgtgttaatgggtcatcagaatcccagcctatcagacccagctattttattttcagctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.
APPLICATION DATA:
APPLICATION NUMBER: US/08/232,463
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Foley & Lardner
1800 Diagonal Road,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                    Length 1525;
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                                                                                                                                                                                                                                         361;
                                                                                                                                                                                                                   Score 727; DB 4; I
Pred. No. 3.7e-177;
0; Mismatches 361;
                             GI5268
     NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
REFERENCE/DOCKET NUMBER: G1526
TELECOMMUNICATION INFORMATION:
TELEFHONE: (617) 496-8224
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1525 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                    50.08;
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                         Conservative
                                                                                                   TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                            256..1404
                                                                                                                                 MOLECULE TYPE: CDNA
                                                                                                                         linear
                                                                                                                                                                                                                              Local Similarity
                                                                                                                                            HYPOTHETICAL: NO FEATURE:
                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                           ; LOCATION:
US-08-846-344-1
                                                                                                                          TOPOLOGY:
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Best Local Simi
Matches 1033;
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6934..6951)
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APPLICATION NUMBER: US/08/261,663A
                                                                                                                                                                                                                                                                                                                                        ORGANISM: Nicotiana glutinosa
TISSUE TYPE: leaf
                                                                                                       REFERENCE/DOCKET NUMBER:

TELECOMMUNICATION INFORMATION:
TELEFAX: (510) 559-667
TELEFAX: (510) 559-5777
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 7400 base pairs
TYPE: nucleic acid
STRANDENNESS: double
             FILING DATE: 800
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: CONDOR, MAYGERE A
REGISTRATION NUMBER: 30043
                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA (genomic)
ORIGINAL SOURCE:
ORGANISM: Nicotiana glutino
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773..1002
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NAME/KEY:
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LOCATION:
LOCATION:
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FEATURE:
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Putent No. 5571706
GENERAL INFORMATION:
APPLICANT: Whitham, Steven A
TITLE OF INVENTION: Plant Virus Resistance Gene and Methods
NUMBER OF SEQUENCES:
CORRESPONDENCE S.6
CORRESPONDENCE ADDRESS:
ADDRESSE: Margaret A. Connor, USDA-ARS
STREET: 800 Buchanan Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 7218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 42.2; DB 1; Length 7:
Pred. No. 0.17;
71; Mismatches 114; Indels
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                     30472/114 IMMU
                                                     APPLICATION
FILING DATE:
APPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30472/114 IMJ
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)683-4109
               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
                                                                                                                                                                                                                                   TELEFAX: (703)683-4109
TELEX: 899149
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 94710
COMPUTER READABLE FORM:
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STATE: CA
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US-08-261-663A-1
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                                       acceattecagecaaatgttteatttatgaaattgaatteacagaggatggtaetaettg 1028
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Patent No. 5736358
GENERAL INFORMATION:
APPLICANT: REYBOND, CHRISTOPHE DOMINIQUE
APPLICANT: REYBOND, CHRISTOPHE DOMINIQUE
TITLE OF INVENTION: DICTYOSTELID EXPRESSION VECTOR AND
TITLE OF INVENTION: METHOD FOR EXPRESSING A DESIRED PROTEIN
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
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Pred. No. 0.
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STATE: PENNSYLVANIA
COUPTR: UNITED STATES OF AMERICA
ZIP: 15219-1818
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" FLOPPY DISK
COMPUTER: Midwest Micro 486-50
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/451,405A
FILING DATE: 26-MAY-1995
CLASSIFICATION: 435
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APPLICATION NUMBER: 07/965,273
FILING DATE: 15-JAN-1993
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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Best Local Similarity
Matches 117; Conservat
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US-08-451-405A-2/C
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                                                                                                                    APPLICANT: Baker, Barbara J
APPLICANT: Whitham, Steven A
TITLE OF INVENTION: Plant Virus Resistance Gene and Methods
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.8%; Score 40; DB 5; Length 7400; 43.9%; Pred. No. 0.64; ative 0; Mismatches 220; Indels
                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/07754A
                                                                                                                                                                                                                           ADDRESSEE: Margaret A. Connor, USDA-ARS
STREET: 800 Buchanan Street
CITY: Albany
2755 CGACATAAGGGAAGGGGCCAAGAATAAGTTTC 2786
                                                                                            Sequence 1, Application PC/TUS9507754A GENERAL INFORMATION:
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ATTORNEY/AGENT INFORMATION:
NAME: CONDO.; MAIGNER: 30043
REFERENCE/DOCKET NUMBER: 0094
TELECOMMUNICATION INFORMATION:
TELEPHONE: (510) 559-6067
TELEFRA: (510) 559-6067
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 7400 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
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MOLECULE TYPE: DNA (genomic)
ORIGINAL SOURCE:
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6601..6933
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2099..2940
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773..1002
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TISSUE TYPE: leaf
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PCT-US95-07754A-1
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LOCATION:
                                                       RESULT 11
PCT-US95-07754A-1
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LOCATION:
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FEATURE:
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1206 tttcttgataccatttgcttttgtctcaatatttgttttggtaataacttgcctgctttt 1265 Gaps ö 4; DB 1; Length 731; 0.67; Indels

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1266 gtataagcaaagggetttactgaaaacgatettteatacaaaaaaaagaagtettttetea 1325
                                                                            1326 tcaagacacattctgttgactcagtaactttcagtcttatggccagatgttaaatatgag 1385
                                                                                                                                                         1386 tottattaaaactgaagcttttcctcaaatattgaataaatcttattttaaaangaaaaa 1445
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFWARE: WINDALIN (Genentech)
CARRENY APPLICATION DATA:
APPLICATION NUMBER: US/08/933,821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 38.4; D
Pred. No. 1.2;
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                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/08933821
Patent No. 597238
GENERAL INFORMATION:
APPLICANT: GUANGWA', Paul J.
APPLICANT: J. J.
APPLICANT: J. DNA WAY
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASALELGATION: 3-30
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Ginger R.
REGIESTATION UNDER: 9130
REFERENCE/DOCKET MUMBER: 9130
TELECOMMUNICATION INFORMATION:
TELEFRAN: 650/252-3216
TELEFRAN: 650/952-3216
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARATTERISTICS:
LENGTH: 3355 base pairs
TYPE: NUCLEIC AGIG
STRANDEDNESS: SINGLE
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Best Local Similarity 49.7%;
Matches 96; Conservative
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US-08-933-821-3
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US-08-933-821-3
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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; Pred. No. 1.2;
0; Mismatches
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                                                                                                                                 Sequence 3, Application US/08960507
Patent No. 6057435
GENERAL INFORMATION:
APPLICANT: Godowski, Paul J.
APPLICANT: Gurney, Austin L.
TITLE OF INVENTION: Tie Ligands
UNMER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: WinPatin (Genentech)
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; Sequence 3, Application US/09136828
; Patent No. 6350450
; GENERAL INFORMATION:
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ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Ginger R.
REGISTRATION NUMBER: 33,055
REPERENCE/DOCKET NUMBER: P113'
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225,3216
                                                                                                                                                                                                                                                                                                  Genentech, Inc.
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CITY: South San Francisco
STATE: California
COUNTRY: USA
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INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 3355 base pairs
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Best Local Similarity 49.77
Matches 96; Conservative
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EDNESS: Single
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1442 aaaaaaaaaaa 1454
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                                                                                                  RESULT 14
US-08-960-507-3
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2.6%; Score 38.4; DB 4; Length 3355;
Best Local Similarity 49.7%; Pred. No. 1.2;
Matches 96; Conservative 0; Mismatches 97; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: 1BW PC compactible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION UNMBER: US/09/136,828
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Ginger R.
REGISTRATION UNMBER: P1130R1A
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORM
APPLICANT: Godowski, Paul J.
APPLICANT: Gurney, Austin L.
TITLE OF INVENTION: Tie Ligands
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 1 DNA WAY
CITY: South San Francisco
STATE: California
COUNTRY: USA
ZIP: 94080
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Search completed: September 23, 2002, 13:36:26 Job time: 7484 Sec THIS PAGE BLANK (USPTO)

Canine IL-13K/IgG-Canine IL-13R/IgG-Canine IL-13R/IgG-Canine IL-13R/IgG-Canine IL-13R/IgG-Canine IL-13R/IgG-Canine interleukin

Human Interleukin-Human Interleukin-Human interleukin Human IL-13 recept Human HR-1 recepto Human cytokine/pep

cDNA encoding the

Canine interleukin Human interleukin-Nucleotide sequenc Human Zcytor2 cyto Celebus macaque Zc Human Zcytor2 cyto CDNA encoding the CDNA encoding IL-1

Mouse Interleukin-Mouse Interleukin-Murine interleukin Mouse IL-13 recept Human soluble cyto

Canine interleukin Canine interleukin Human interleukin-

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07-APR-2000; 2000US-195659P 07-APR-2000; 2000US-195874P

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Canine interleukin

AAS59962

Result œ. IL-13R extr IL-13R extr IL-13R/IgG-

WPI; 2001-657172/75. P-PSDB; AAU69135. McCall CA, Tang L; (HESK-) HESKA CORP

Mature interleukin Construct containi

Sequence:

Run on:

Searched:

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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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AAT96783
AAT95213
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AAT85826
AAV89756
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AAA27912
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AAC81416
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  09-APR-2001; 2001WO-US11498
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N. Centeseq, J. Carol.

N. Centeseq, J. Carol.

N. Carol. Gada Laygeneseq, Geneseqn - embl./NA1981. DAT: *

N. SIDS1/gcgdata/geneseq/geneseqn - embl./NA1984. DAT: *

N. SIDS1/gcgdata/geneseq/geneseqn - embl./NA1981. DAT: *

N. SIDS1/gcgdata/geneseq/geneseqn - embl./NA1991. DAT: *

N. SIDS1/gcgdata/geneseq/geneseqn - embl./NA2001A. DAT: *

N. SIDS1/gcgdata/geneseq/geneseqn - embl./NA2001B. D
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                       GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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Listing first 45 summaries
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                                                                                    The invention concerns an isolated canine protein, preferably canine receptor protein, the nucleic acids encoding them, antibodies raised against them, the nucleic acids encoding them, antibodies and sethods of isolating regulators between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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receptor protein, the nucleic acids encoding them, antibodies
raised against them, fusion proteins between the 1gG and IL-13R proteins
and methods of isolating regulators of them. The regulators are useful
for regulating an immune response in a canine. The proteins useful to
develop regulatory compounds including inhibitors and activators that,
when administered to a canine in an effective manner, are capable of
protecting canine from disease mediated by IL-13Ralpha or IL-13. The
regulators are useful for treating canine 1gG (heavy and/or light chain)
and/or canine IL-13R mediated responses. The molecules of the invention
are useful to regulate the immune response of an animal (e.g. by gene
therapy). The present sequence is the reverse complement of a cDNA
encoding a protein of the invention.
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                                                                                                                                                                 Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                  Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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100.0%; Pred. No. 8.1e-261;
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds
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100.0%; Pred. No. 4.1e-246;
ive 0; Mismatches 0;
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100.0%; Pred. No. 4.1e-246;
ive 0; Mismatches 0;
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2000US-195874P.
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Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                                  gagtcatcagactataaagatttctacatctgtgtttaatgggtcatcagaatcccagcct
          ggacccattccagccaaatgtttcatttatgaaattgaattcacagaggatggtactact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Canine IL-13R extracellular domain cDNA nCaIL-13Ralpha2 954.
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) (IC-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, the nucleic acids encoding them, antibodies and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IG havy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulators encodes a protein of the invention.
                                              Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds
                                                                                                                                                     Claim 19; Page 184-185; 221pp; English.
P-PSDB; AAU69137
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Sequence 954 BP; 329 A; 162 C; 192 G; 271 T; 0 other;

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Score 947.8; DB 22; Length 954;
Pred. No. 9.2e-212;
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The invention concerns an isolated canine protein, preferably canine immunoglobulin (G IgG) protein or canine interlewin-13 (LL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence is the reverse complement of a cDNA encoding a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds
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                                                                     ggacccattccagccaaatgtttcatttatgaaattgaattcacagaggatggtactact 1026
                              taccttagtcttactgtgaagaattcagaggaaattaacctgaaatggaacatgcctaaa 723
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Laccttagtcttactgtgaagaattcagaggaaattaacctgaaatggaacatgcctaaa
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ID AAS59969 standard; cDNA; 954 BP.
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                                                                                                                                                                                                Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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AAS59970 standard;
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                                                                                                                                                                                                                                                                      Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                                                                                                                                                                                                                                      Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds -
Canine IL-13Ralpha2/IgG-Fc fusion protein cDNA reverse complement
                                                  Score 947.8; DB 22; Leuy...
Pred. No. 1.1e-211;
....artches 2; Indels
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ID AAS59977 standard; cDNA; 1686 BP.
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Gaps

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Best Local Similarity 99,8 Matches 949; Conservative

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Query Match

DB 22; Length 1686;

247 tctatgctttcaaatgctgagataaaagttaatcctcctcaggatttgagatagtggac 306

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LL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
Immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                     Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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Pred. No. 1.1e-211;
0; Mismatches 2;
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99.8%;
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2000US-195874P.
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Hes 949; Conservative
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                                                                                                                                                                               McCall CA, Tang L;
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                                        Canis familiaris
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                     immune response.
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07-APR-2000;
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Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG FC; immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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                                                                                           The invention concerns an isolated canine protein, preferably canine immunoglobulin (6 IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, tusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compunds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therappy). The present sequence is the reverse complement of a cDNA encoding a protein of the invention.
Novel isolated canine protein, preferably canine immunoglobulin G
protein or canine interleukin-13 receptor protein useful for regulating
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Pred. No. 1.1e-211;
0; Mismatches 2;
                                                               Example 4; Page 206; 221pp; English.
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99.8%;
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) (receptor protein, the nucleic acids encoding them, antibodies raised against them, fusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulator esponse of an animal (e.g. by gene therapy). The present sequence encodes a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc;
immunoglobulin light chain; lambda; ss; immunosuppressive; gene therapy;
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AX345921 Sequence
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
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Best Local Similarity 100.0%; Pred. No. 2.2e-284;
Matches 1454; Conservative 0; Mismatches 0;
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                                                                                          /organism="Canis familiaris"
/db_xref="taxon:9615"
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Corporation (US)
Location/Qualifiers
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Carnivora; Fissipedia; Canidae;
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Compositions and methods related
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Location/Qualifiers
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Mammalia; Eutheria;
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Best Local Similarity 100.
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100.0%; Pred. No. 2.2e-284;
ive 0; Mismatches 0;
                            /organism="Canis familiaris"
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100.0%; Pred. No. 6.8e-212;
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PDYLSLTVWNSEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWYTVENEIQITRTS
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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/db_xref="taxon:9615"
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Heska Corporation (US)
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Compositions and methods related to
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/db_xref="taxon:9615"
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Heska Corporation (US)
Location/Qualifiers
                                                                                                                                                                                                          Mccall,C.A. and Tang,L. Compositions and methods related to
                                                                                                                       Sequence 67 from Patent WO0177332.
AX280332
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                                                                            CAAGACACATTCTGT 1095
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AX280332/c
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AUTHORS
TITLE
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and
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/db_xref="taxon:9615"
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Heska Corporation (US)
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Sequence 68 from Patent WO0177332.
AX280333
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/protein_id="CAD10583.1"
/db_xref="G1:16607712"
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/translation-"MSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWOPPLFPDNFKEC
TIEYELKYNTDSENWRTITITKNLLFYKGEDLAKTTLLLAGACTWGSEYRSSW
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AETTWATSPGONNEWTIODMCOYYNWQYLOCSWKFOMGVHFDTNYQLEYWSGLDHS
AECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPM
PPDYLSLTVKNSEEINLKWNMFGGPIRPKCFTYEIEFFEDGTTWWYTTTVENEIQITRT
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No. 4.3e-182;
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Eukaryota; Metazoa; Chordata; Craniata; Ver
Mammalia; Eutheria; Carnivora; Fissipedia;
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No. 4.3e-182;
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/organism="Canis familiaris"
/db_xref="taxon:9615"
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Mccall, C.A.
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Patent: WO
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SNESOKLCFLYRSK WYN YCSDDG TNSEWSDEGCWKGDIWKETGSNRFVDKFVFFDETG
TDTPPCPVPEPLGGPSVLIFPPKPKDILRITRTPEVTCVVLDLGREDDEVQISWFVDG
KSPHTAKTQSRRQQFNGTYRVVSVLPFEHQDMITGKEFKRNHIDLESPIEFTISKA
RGRAHKPSVYVLPPSPELSSSPTWSITCLIKDFYPPDIDVEWQSNGQCEPTRIRMT
PPQLDEDGSYFLYSKLSSSDTVSITCLIKDFYPPDLDVEWQCEPTRIRMT
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/db_xref="C1:16607715"
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TIEYELKYRNIDSENWYTITKNLHYROGFDLNKGIEAKINTLLPAQCTNGSEVRSSW
AETTYWTSPQGNRETKIQDMDCVYXNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHS
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Canis.
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Carnivora; Fissipedia; Canidae;
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Pred. No. 3.9e-182;
; Mismatches 2;

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    /note="unnamed protein product"

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/db_xref="taxon:9615"
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Heska Corporation (US)
Location/Qualifiers
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Mccall,C.A. and Tang,L.
Compositions and methods related to
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AX280336.1 GI:16607714
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Mammalia; Eutheria; Carnivora;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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Mammalia; Eutherla; Carnivora; Fissipedia; Canidae;
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                        canine 199
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Pred. No. 3.9e-182;
0; Mismatches 2;
                                                                             /organism="Canis familiaris"
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                                         Patent: WO 0177332-A 73 18-OCT-2001;
Heska Corporation (US)
Location/Qualifiers
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                 Mccall, C.A. and Tang, L. Compositions and methods related
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AECTDYIKNNGKNMROGREPYLESSDYKDRTYTOVNESSEQFIREPSTFFFEQUAIVKPW
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SNESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETGSNTKVDKPVPKESTC
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from Patent WO0177332.
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AX280342
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Canis familiaris
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; |
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; |
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/organism="Canis familiaris"
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Patent: WO 0177332-A 79 18-OCT-2001,
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Sequence 79 from Patent WO0177332.
AX280344
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Mccall,C.A. and Tang,L.
Compositions and methods related
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Location/Qualifiers
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MTPPQLDEDGSYFLYSKLSVDKSRWQRGDTFICAVMHEALHNHYTGISLSHSPGK"
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Mccall,C.A. and Tang,L.
Compositions and methods related to canine igg and canine il-13
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Mammalia, Eutheria, Carnivora, Fissipedia, Canidae, Canis.
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/db_xref-"taxon:9615"
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/note-"unnamed protein produ
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Patent: WO 0177332-A 77 18-OCT-2001;
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
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Q9pti0 vis aries
Q90f10 vis aries
Q90f10 callithrix
Q93404 oreochromis
Q96f0 sparus aura
Q96p36 homo sapien
Q96p35 homo sapien
Q90p35 homo sapien
Q90p35 homo sapien
Q96p36 homo sapien
Q90p38 carvus elap
Q90zi6 paralichthy
Q90zi6 paralichthy
Q99m88 carvus elap
Q96p38 mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                         Q9w6u9 gallus gall
O75462 homo sapien
Q9uhh5 homo sapien
O57519 xenopus lae
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Q9myk9 macaca mula
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                    Q9zlaO cavia porce
Q99jzl mus musculu
Q9xs9z trichosurus
018880 bos taurus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Molecular cloning of canine IL-13 receptor alpha chain (alphal and alpha2) cDNAs and detection of corresponding mRNAs in canine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MAFIHLDVGFLYTLLVCTAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDN
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis
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01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INTERLEUKIN 13 RECEPTOR ALPHA CHAIN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vet. Immunol. Immunopathol. 79:181-195(2001)
EMBL; AF314533; AAL14887.1; -
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Q93404
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PRELIMINARY;
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  RESULT
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090xp8 oncorhynchu
096bb4 homo sapien
014631 homo sapien
0951f1 canis famil
0951f1 cavis apien
0950f4 cavia porce
097597 bos taurus
0920b8 rattus norv
                                                                                                                             ; Search time 31.88 Seconds (without alignments) 2094.606 Million cell updates/sec
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Q9degl oncorhynchu
Q64146 rattus norv
Q9glw3 ursus marit
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                                                                                                                                                                                                                                                 1 MAFIHLDVGFLYTLLVCTAF......LLKTIFHTKKEVFSHQDTFC 386
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Copyright (c) 1993 - 2000 Compugen Ltd
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Listing first 45 summaries

    protein search, using sw model

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                                                                                                                                                                                                                                                                                                                                                                                                                                          Collins M.;
"The murine IL-13 receptor alpha 2: molecular cloning,
characterization, and comparison with murine IL-13 receptor alpha 1.";
J. Immunol. 161:2317-2324(1998).
                                                                            300
                                  240
                                            300
                                                                                                                       QKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                      61 FKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRS 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56 FKGCTLEYELKYRNVDSDSWKTIITRNLIYKDGFDLNKGIEGKIRTHLSEHCTNGSEVQS 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 SWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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MEDLINE-98391042; PubMed-9725226;
Donaldson D.D., Whitters M.J., Fitz L., Neben T.Y., Finnerty H.,
Henderson S.L., O'Hara R.M. Jr., Beier D.R., Turner K.J., Wood C.R.,
                                                                                        241 DYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MAFIHLDVGFLYTLLVCTAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDN
                               AECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPP
                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 11; Length 383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59.6%; Score 1271.5; DB 11; Lengt
57.2%; Pred. No. 1.4e-98;
iive 71; Mismatches 88; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; U65747; AAC33240.1; -
EMBL; BC003723; AAH03723.1; -.
HSSP; PI6471; IBP3.
                                                                                                                                                                                                                                                                    01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
IL-13 RECEPTOR ALPHA 2 (INTERLEUKIN 13 RECEPTOR, ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         383 AA; 44482 MW; C25212325C47E35B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGD; MGI:1277954; Ill3ra2.
InterPro; IPR002996; CRIA.
InterPro; IPR003532; Hematopo_receptor_S_F2.
PROSITE; PS01356; HEMATOPO_REC_S_F2; UNKNOWN_1.
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                                                                                                                                                                                                                                                  383
                                                                                                                                                                             361 LYKORALLKTIFHTKKEVFSHODTFC 386
                                                                                                                                                                    LYKORALLKTIFHTKKEVFSHQDTFC 386
                                                                                                                                                                                                                                                   PRT;
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                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                              musculus (Mouse).
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SEQUENCE
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Best Local S:
Matches 222,
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240
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                         181 AECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPP
                                                                                                  DYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193 TGCKFTEESLSEFSDFNICINSSSPEVVLRSAFFSLQIQNYVKPAAIETVHLEASPDRRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254 NLKWNMPKGPIPAKCFIYEIEFTEDGT---TWVTTTVENEIQITRTSNE-SQKLCFLVRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194 MGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLONIVKPMPPDYLSLTVKNSEEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri). Bukaryota: Metacora, Chordata; Cherlebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lockyer A.E., Jones C.S., Noble L.R., Verspoor E., Holland J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Secondes C.J.;
"Isolation and characterization of a putative interleukin 13 alpha-2 sequence from rainbow trout (Oncorhynchus mykiss).";
Submitted (MAR.2001) to the EMBL/GenBank/DDBJ databases.
EMBL, AF361437; AAL26927.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 404;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INTERLEMENT 13 RECEPTOR ALPHA-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69; Mismatches 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 6.3e-40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA.
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                                                                                                                                                                                                                                                                                                  361 LYKQRALLKTIFHT--KKEVFSHQDTFC 386
                                                                                                                                                                                                                                                                                                                              PRT;
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Matches 105; Conserv
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Gaps

36;

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SEQUENCE FROM N.A.
TISSUE-PERIPHERAL BLOOD;
MEDLINE-92121815; PubMed=1732409;
Murata Y., Takaki S., Migita M., Kikuchi Y., Tominaga A., Takatsu K.;
"Molecular cloning and expression of the human interleukin 5
                                                                                                                                                                                                                                                                                                                                                                  142 MDCVYYNWQ-----YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                                                                                                                                                                                                                                                                                                                         190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
                                                                                                                                                                                                                                                                                                                                                                                                                                    190 LGRNIACWFPRTFILSKGRDWLAVLVNGSSKHSAIRPFDQLFALHAIDQINPP--LNVTA 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                248 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
                                                                                                                                                                                                                                 23 MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                          22 LLPDEKISLLPPVNFTIKVTG-LAQVLLQWKPN--PDQEQRNVNLEYQVKINAPKEDDYE 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                TYPE 2.
                                                                                                                                                                      14.7%; Score 313; DB 4; Length 396; 28.9%; Pred. No. 3.1e-18; ive 62; Mismatches 156; Indels
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                                                                                                               INTERLEUKIN-5 RECEPTOR TO 1AB60619842ACDA5 CRC64;
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8DC56DFC8BEFF524 CRC64;
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19, Last annotation update)
PRECURSOR.
            J. Exp. Med. 175:341-351(1992).

EMBL; X61177; CAA43484.1; -.

InterPro; IPRO02996; CRIA.

InterPro; IPR003532; Hematopo_receptor_S_F2.

SIGNA: PS01356; HEMATOPO_REC_S_F2; UNKNOWN_1.
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EMBL; X61176; CAA43483.1; -.
InterPro: IPR003996; CRIA.
InterPro: IPR003532; Hematopo_receptor_S_F2.
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396 IN
44998 MW;
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420
47670 N
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Best Local Similarity 28.99
Matches 103; Conservative
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01-DEC-2001 (TrEMBLrel.
INTERLEUKIN-5 RECEPTOR
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                                                                                                                            396 AA;
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 receptor.";
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SEQUENCE
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TISSUB-PERIPHERAL BLOOD;
MEDLINE-92121B15; Pubhed-1732409;
Murata Y., Takaki S., Migita M., Kikuchi Y., Tominaga A., Takatsu K.;
"Molecular cloning and expression of the human interleukin 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         286
                                                                                                                                                                                                                                                                                                                                                                                                                                       LKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLL----PAQC-TNGSEVRSSWAE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECT 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             243 LSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNESQK 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287 FERNVENTSCFMVPGVLPDTLNTVRIRVKTNKLCYEDDKLWSNWSQEMSIGK---KRNST 343
                                                                                                                                                                                                                                                                                                                                    Gaps
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                 67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             341 FFLIPFAFVSIFVL-VITCLLLYKQRALLKTIFHTK-----KEVFSHQD 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14.9%; Score 318.5; DB 4; Length 427; 25.5%; Pred. No. 1.2e-18;
                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Butele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                Strausberg R.;
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC015768; AAH15768.1; -.
                                                                                                                                                                                                                                                          E6A42F7466A39A09 CRC64;
                                        01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INTERLEUKIN 13 RECEPTOR, ALPHA 1.
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19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                 64; Mismatches 176;
                AA.
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             427
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01, Last sequ
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                                                                                                                                                                                                                                                          427 AA; 48676 MW;
                                                                                                                                                                      SEQUENCE FROM N.A.
TISSUE=COLON ADENOCARCINOMA;
                                                                                                                                                                                                                                                                                                                  Best Local Similarity 25.5
Matches 105; Conservative
             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01-NOV-1996 (TrEMBLrel.
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                                                                                                 Homo sapiens (Human).
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                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                             Receptor.
SEQUENCE
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                                                                                                                                                                                                                                                                                                       Query Match
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                         Q96BB4;
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TISSUE=PERIPHERAL BLOOD;
MEDLINE=92121815; PubMed=1732409;
MULTE=22121815; PubMed=1732409;
MULTE S. Mighta M., Kikuchi Y., Tominaga A., Takatsu K.;
"Molecular cloning and expression of the human interleukin 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
           198 VPLTSHVKPDPPHIKRLFFQNG-NLYVQWKNPQN-FYSRCLSYQVEVNNSQTETNDIFYV 255
                                                                NEIQITRISNESQ----KLCFLV-------RSKVNIYC-SDDGIWSEWSDEQCWK 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82 TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142 MDCVYYNWQ-----YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LTCTTNTTEDNYSRLRSYQVSLHCTWLVGTDAPEDTQYFLYYRYG--SWTEECQEYSKDT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII---DDLSKY 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23 MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332 GDIWKETLVFFLIPFAFVSIFVL--VITCLLLYKQRALLKTIFHTK------KEVFSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV
                                                                                                                  EEAKCONSEFEGNLEGTICFMVPGVLPDTLNTVRIRVRTNKLCYEDDKLWSNWSQAM---
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CHAIN 21 333 SOLUBLE INTERLEUKIN-5 RECEPTOR.
SEQUENCE 333 AA; 37722 MW; 8D9239845E16985B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 333;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
SOLUBLE INTERLEUKIN-5 RECEPTOR PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14.0%; Score 298; DB 4; Lv
29.5%; Pred. No. 4.6e-17;
iive 57; Mismatches 134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Exp. Med. 175:341-351(1992).

EMBL: X62156; CAA44081.1; -.

InterPro: IPR002996; CRIA.

PROSITE; PS01356; HEMATOPO_REC_S_F2; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 29.5%;
Matches 95; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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                                                                                                                                                                                                                                                                              382 QD 383
                                                                                                                                                                                                                                                                                                                                 370 QN 371
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                                    15;
                                                                                                                                                                                           TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
                                                                                                                                                                                                                                                                                                                                      112 C-TNGSEVRSSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQL 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                171 FYWYEGLDHSAECTDYIKVNGKNMGCRFPY--LESSDYKDFYICVNGSSESQPIRPSYFI 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79 TRITES --- KCVTILHKGFSASVRTILQ --- NDHSLLASSWASAEL - HAPPGSPGTSVVN 131
                                                                                                                                                                                                                                                                                                  142 MDCVYYNWQ-----YLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIK-V 189
                                                                                                                                                                                                                                                                                                                                                                                                            190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRTSNESQKL 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52 WQPPLFPDNFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQ 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229 FQLQNIVKPMPPDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVE 288
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                     :|::|:||:|| | | |:|| | |:||:|| |:::|
22 LLPDEKISLLPPVNFTIKVTG-LAQVLLQWKPN--PDQEQRNVNLEYQVKINAPKEDDYE 78
                                                                                      MLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Molecular cloning of canine IL-13 receptor alpha chain (alphal and alpha2) cDNAs and detection of corresponding mRNAs in canine tissues.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304 CFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DVQVRAAVSSMCREAGLWSEWSQPIYVGNDEHKPLREWFVIVIMATICFILLILSLI 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
Canis.
                                    36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 405;
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26.8%; Pred. No. 4.7e-18;
ive 59; Mismatches 156; Indels
        ed. No. 4e-18;
Mismatches 156; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 1
405 AA; 46328 MW; 926E1AC7BE5E3F42 CRC64;
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Mammalla, Eutheria, Carnivora, Fissipedia, Canidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>-</del>:-
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INTERLEUKIN 13 RECEPTOR ALPHA CHAIN 1 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vet. Immunol. Immunopathol. 79:181-195(2001).
EMBL; AP314532; AAL14886.1; -.
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::
        Pred. No.
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MEDLINE~21287533; PubMed~11389954;
                                 63;
     28.68;
Best Local Similarity 28.6°
Matches 102; Conservative
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NON_TER
SEQUENCE
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Q95LF1;
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us-09-828-995b-61.rspt

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INTERLEUKIN-13 RECEPTOR ALPHA-1 CHAIN (FRAGMENT)
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                                                                                                                                      Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                     NCBI_TaxID=9913;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Norris T.E., "Cloning and Characterization of the Guinea Pig Interleukin-5 receptor alpha cDNA.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127 YWTSPQGNRETKIQDMDCV----YYNWQ----YLVCSWKPGMGVHFDTNYQLFY--- 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173 -WYEGLDHSAECTDYIK-VNGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFI 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              287 VENEIQITRTSNESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPF 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67 EYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115 H-KAPPGSPGTSIVNLTCTTNTAASNYTNLKSYEVSLHCTWLAGKDAPEDTQYFLYYRYG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55; Gaps
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases
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Last sequence update)
Last annotation update)
                                                                                                                                                                                                                            01-MAY-1999 (TrEMBLrel. 10, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update) INTERLEUKIN-5 RECEPTOR ALPHA PRECURSOR.
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InterPro; IPR002996; CRIA.
InterPro; IPR003951; FN_III.
FIGUREPPO: IPR003532; Hematopo_receptor_S_F2.
Pfam: PF00041; fn3; 1.
PROSITE; PS01356; HEMATOPO_REC_S_F2; UNKNOWN_1.
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27.2%; Pred. No. 6.5e-17;
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343 TAVLCFILLIFFFLC-----RIYHLWTKMF 367
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415 AA; 46913 MW;
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(TrEMBLrel. 19, I
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Best Local Similarity 27.2%
Matches 107; Conservative
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01-MAY-1999 (
01-JUN-2001 (
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SEQUENCE
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EMBL; AF324153; AAK97344.1; ...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240 IFYVEEAKCQNTEFEGNLEGTICFMVPGVLPDTLNTVRIRVKTNKLCYEDDKLWSNWSQA 299
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FYWYEGLDHSAECTDYIKVNGKNMGCRF--PYLESSDYKDFYICVNGSSESQPIRPSYFI 228
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                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDINED-10614495; MEDINE-20080132; PubMed-10614495; Trigona W.L., Brown W.C., Estes D.M.; Functional implications for signaling via the IL4R/IL13R complex on "Functional implications for signaling via the IL4R/IL13R complex on "Functional implications".
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Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 WNPP--EGASPNCSLKYFSHFGNKQDKK----IAPETHRSKEVPLNERICLOVG----SQ
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 13.4%; Score 286; DB 6; Length 349; Best Local Similarity 25.8%; Pred. No. 4.9e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61; Mismatches 147; Indels
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349 349
349 AA; 39644 MW; D61A4C918B1940A6 CRC64;
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INTERLEUKIN-5 RECEPTOR ALPHA.
                                                                                                                                                                                                                                                                                                                                                                                         DOVING CELLS.

EMBL; AF074402; AAC98147.1; -
INTERFO. IPRO02996; CRIA.
INTERFO: IPRO03532; Hematopo_receptor_S.F.2.
PROSITE; PS01356; HEMATOPO_REC_S.F.2; UNKNOWN_1.
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KCI-SPPEGDPESAVTELQCIWHNLSYMKCSWLPGRNTSPDTNYTLYYWHRSLEKIHQCE 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DYIKVNGKNMGCRFPY--LESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDY 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENEIQITRTS 297
                                                                                                                                                                                                                                                                                                                                                                                                   NESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVIT 357
                                                                                                                                                                                                                                                                                                                                                                                                                             70 LKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLL----PAQC-TNGSEVRSSWAE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 TTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECT 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                           | :| :| :| | | | : | : | | | CQEYSRDALNRNIACWFPRTFINSKGFEQLAVHINGSSKHAATKPLDQLFTLYAIDQVNP
    14 TLHADLLSPEKFLLLPPVNFTIKATG-LAQVLLHWDPN--PDQ-DPVDLEYHVKI-NVPQ
                                                                                                                                                 KIQDMDCV----YYNWQY-LVCSWKPGMGVHFDTNYQLFY----WYEGLDHSAE
                                                                                                                                                                                                                                                                                                                                                          PMNVTVEIENN-SLYIQWGKPLSAFPVHCFKYKLKIYNTKNGYSQMENLVTNKF-ISKID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LYTLLVCTAFGSMLSN-AEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDNFKECTIEYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 LWALLICAGGGGGGGAAPTETQPPVTNLSVSVENLCTVIWTWNPP--EGASSNCSLWY-
                                                                                                                                                                                                                                 183 CTDYIK-VNGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP
                                                                 ENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRET
                                                                                                        ED - - EYDTKNTESKCVTPLHECFAASVRTILK - - - SIHSPLASSWVSAEL - KAPPGSSGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 12.3%; Score 263; DB 4; Length 27 Best Local Similarity 26.3%; Pred. No. 3.2e-14; Matches 73; Conservative 53; Mismatches 126; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wada M., Hisano T., Kuwano M.;
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; UR1380; AADO0511.2; -.
InterPro; IPR002996; CR1A.
InterPro; IPR003532; Hematopo_receptor_S_F2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                279 AA; 31658 MW; E74141FE9F8E9EBB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INTERLEUKIN-13 RECEPTOR SOLUBLE FORM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243 LSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS01356; HEMATOPO_REC_S_F2; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   279 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    358 CLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           353 SLI 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Receptor.
SEQUENCE
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                                                                                                        69
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9UDY5
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                                                                                                                           18;
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                                                                                                                                                                                                                                                                                       ED--EYDTKNTESKCVTPLHEGFAASVRTILK---SIHSPLASSWVSAEL-KAPPGSSGT 122
                                                                                                                                                                                                                                                                                                                                138 KIQDMDCV-----WYEGLDHSAE 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             237 PMNVTVEIENN-SLYIQWGKPLSAFPVHCFKYKLKIYNTKNGYSQMENLVTNKF-ISKID 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRET 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298 NESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVIT 357
                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                       14 TLHADLLSPEKFLLLPPVNFTIKATG-LAQVPLHWDPN--PDQ-DPVDLKYHVKI-NVPQ 68
                                                                                                                                                                18 TAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDNFKECTIEYELKYRNIDS 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18 TAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDNFKECTIEYELKYRNIDS 77
                                                                                                                                                                                                                                                                                                                                                                                                                                               CIDYIK-VNGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENEIQITRTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Identification of cDNA encoding rat interleukin-5 receptor alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41;
                                                                                                                           41;
                                                                                  Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11; Length 414;
                                                                           Query Match
13.3%; Score 283.5; DB 11; Length
Best Local Similarity 26.4%; Pred. No. 9.7e-16;
Matches 96; Conservative 68; Mismatches 158; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
E424B0A5F5F21F89 CRC64;
                     4340F42F47297D84 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-OCT-2001 (TrEMBLrel. 18, Last annotation update)
INTERLEUKIN-5 RECEPTOR ALPHA CHAIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 12.8%; Score 272.5; DB 11; 1 Similarity 26.2%; Pred. No. 8.1e-15; 95; Conservative 67; Mismatches 160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00060; FN3; 2.
PROSITE; PS01356; HEMATOPO_REC_S_F2; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL: ABD55101; BAB32866.1; InterPro; IPR002996; CR1A. InterPro; IPR003961; FN_III. InterPro; IPR003532; Hematopo_receptor_S_F2.
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STRAIN-SPRAGUE-DAWLEY;
Ishihara K., Asai K., Ohuchi K.;
                   47075 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47108 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   414 AA;
                   414 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal; Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     358 CLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SLI 355
Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S:
Matches 95,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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099PS3;
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RESULT 12 Q99PS3

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353

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Neurosci. 15:5800-5809(1995).
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NON_TER
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                          Signal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               130 SPQGNRETKIQDMDCVYYNWQYLVCSWK----PGMGVHFDTNYQLFYWYEGLDHSAECTD 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wang T., Secombes C.J.;
"Cloning and expression of a putative common cytokine receptor gamma chain gene in rainbow trout (Oncorhynchus mykiss).";
Fish and Shellfish Immunol. 11:233-244(2001).
EMBL; AJ276623; CAC09429.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13 SLQGYEAPSTPNVNCLIINLDYVNCIWSEQSIP-----EVNFTFFSSRFIKDNMEECTT 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                           01-MAR-2001 (TrEMBLrel. 16, Created).
01-DBC-2001 (TrEMBLrel. 19, Last sequence update).
01-DBC-2001 (TrEMBLrel. 19, Last annotation update).
01-DBC-2001 (TrEMBLrel. 19, Last annotation update).
CYTOKINE RECEPTOR COMMON GAMMA CHAIN.
Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
EMRATYORIS Metascos; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protaccanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQ-ITRTSNESQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KLCFLVRSKVNIYCSDDGIWSEWSDEQCW---KGD-----IWKETLVFFLIPFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-95370942; PubMed-7643220; Appel K., Butlini M., Sauter A., Gebicke-Haerter P.J.; Appel K., Butlini M., Sauter A., Gebicke-Haerter P.J.; "Cloning of rat interleukin-3 receptor beta-subunit from cultured microgalia and its mRNA expression in vivo.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13; Length 343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ch 10.7%; Score 228.5; DB 13; Length
l Similarity 25.3%; Pred. No. 3.2e-11;
67; Conservative 46; Mismatches 105; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343 AA; 39486 MW; ED8429E7534B21EB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
INTERLEUKIN-3 RECEPTOR BETA-SUBUNIT (FRAGMENT).
334 KNLSFHN-DDLYVQWENPQNFI-SRCLFYEVEVNNSQT 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   896 AA
                                                                                                                                            343 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. 01, Created) (TrEMBLrel. 01, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE-21287902; PubMed=11394690;
Wang T., Secombes C.J.;
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Rattus norvegicus (Rat).
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Q64146;
Q1-NOV-1996 (
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Best Local S:
Matches 67,
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Q9DEQ1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --ELQASRYTRYHCSLN---VSDPAAHSQYTVSVKRLEQGKFIESFNHIQMNPPTLNLT- 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNESQKL---- 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVK-------PMPPDYLSLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.2%; Score 218.5; DB 11; Length 896; 22.0%; Pred. No. 7e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                    Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
EMBL: S79263: AAB35068.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                         4C6E3B288A4A1052 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60; Mismatches 154;
                                                                                                                                                                                                                                                                                                                             PROSITE; PS01355; HEMATOPO_REC_S_F1; UNKNOWN_1
                                                                                                                          EMBL, AJ000555; CAA04186.1; -.
InterPro; IPR002996; CRIA.
InterPro; IPR00282; Cytok_receptor_2.
InterPro; IPR00361; FN_III.
InterPro; IPR003531; Hematopo_receptor_S_F1.
Pfam; PF00041; fin3; 2.
SMART; SM00060; FN3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search completed: September 20, 2002, 11:54:25 Job time: 144 sec
                                                                                                                                                                                                                                                                                                                                                                                                          896
99504 MW;
SEQUENCE FROM N.A.
STRAIN-WISTAR; TISSUE-BRAIN;
Gebicke-Haerter P.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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896 8
896 AA;
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4.5
Compugen Ltd.
GenCore version
Copyright (c) 1993 - 2000
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OM protein - protein search, using sw model

September 20, 2002, 11:51:31 Run on:

; Search time 21 Seconds
(without alignments)
1766.213 Million cell updates/sec

US-09-828-995B-61 2132

1 MAFIHLDVGFLYTLLVCTAF......LLKTIFHTKKEVFSHQDTFC 386 Title: Perfect score: Sequence:

Scoring table:

283138 seqs, 96089334 residues BLOSUM62 Gapop 10.0 , Gapext 0.5 Searched:

283138 Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 sed Minimum DB s Maximum DB s Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		ď			SUMMARIES	
Result No.	Score	Query Match	Length	DB	ID	Description
	349.5	16.4	426	5	JC7773	IL-13Raloha 1 prot
7	312		420	(7)	521052	'n
e	298	14.0	335	7	A40267	
4	266	12.5	415	~	S12357	interleukin-5 rece
2	256	12.0	831	7	JQ1655	prolactin receptor
9	232	10.9	369	7	A42565	interleukin-2 rece
7	221	10.4	878	-	A40091	interleukin-3 rece
80	221	10.4	968	Н	A35782	cytokine receptor
6	218.5	10.2	968	~	I56563	interleukin-3 rece
10	217.5	10.2	830	7	I50455	prolactin receptor
11	216	10.1	373	7	A55718	interleukin-2 rece
12	208	9.8	369	7	I49280	interleukin-2 rece
. 13	195		581	7	145971	prolactin receptor
14	194	9.1	310	7	A29884	prolactin receptor
15	194	•	412	7	A41070	prolactin receptor
16	194	9.1	610	7	A36116	prolactin receptor
17	193		610	7	A34631	lactogen receptor
18	192	9.0	897	-	A39255	cytokine receptor
19	189		292	7	177525	prolactin receptor
20	189	8.9	303	~	177524	prolactin receptor
21	189		809	7	153269	prolactin receptor
22	180.5	•	630	7	151086	prolactin receptor
23	178	•	616	7	A30304	prolactin receptor
24	172.5		288	~	B59405	prolactin receptor
25	172.5	•	376	7	A59405	prolactin receptor
56	172.5	•	622	~	A40144	prolactin receptor
27	154.5	7.2	917	~	149699	glycoprotein 130 -
28	150		918	7	A36337	membrane glycoprot
29	145	6.8	918	7	A44257	interleukin-6 sign

187 IKVNGKNMGCRFPYLE-SSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSL 245

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246 TVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGT-TWVTTTVENEIQITRTSNESQKL- 303

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304 ---CFL------VRSKVNIYCSDDG-IWSEWSDEQCWKGDIWKE-TLVFFLIP 345

346 FAFVSIFVLVITCLLLYKQRALLKTIF-----HTKKEVFSHQD 383

291

granulocyte-macrop granulocyte-macrop	granulocyte-macrop somatotropin recep	interleukin-3 rece lactogen receptor	somatotropin recep	interleukin-4 rece protein-tyrosine-p	protein-tyrosine-p	granulocyte-macrop leukemia inhibitor	titin, muscle - ch	interleukin-4 rece	protein H19M22.1 {	hypothetical prote
S06945 S13684	S50040 S12136	A40266 B34631	B28176	5315/5 D41214	C41214	S50039 S17308	A48721	A60386	C88400	T32828
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6.8	6.7	6.2	0.9	0.0	0.0	5.0 0.8	5.8	5.8	5.7	5.7
144.5	143 136.5	131.5	127.5	127.5	127.5	124.5	123.5	123	122.5	122.5
30	32 33	35	36	38	36	41	42	43	44	45

ALIGNMENTS

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A; Cross-references: GB: AY044251
C; Comment: This protein is an functionally binding protein involved in B cell prolife
C; Genetics:
A; Gene: il-13ralphal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
IL-13Ralpha 1 protein - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 0.1-Feb-2002 #sequence_revision 01-Feb-2002 #text_change 01-Feb-2002
C:Accession: JC773
R:Pierrot, C.; Beniguel, L.; Begue, A.; Khalife, J.
Biochem. Biochem. Biophys. Res. Commun. 287, 969-976, 2001
A:Title: Expression of a functional IL-13Ralphal by rat B cells.
A:Reference number: JC7773; PMID:11573960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49;
                                                                                                                                                                                                                                                                                                                                                                                                                 16.4%; Score 349.5; DB 2; Length 426; 27.9%; Pred. No. 3.7e-19; ive 65; Mismatches 178; Indels 49
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 16.49
Best Local Similarity 27.99
Matches 113; Conservative
                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-426 <PIE>
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CFLVRSKVNIYCSDDGIWSEWS 325
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| 
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                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-420 c<sub>MUR></sub>
A; Coss-references: EMBL:X61176; NID:933843; PIDN:CAA43483.1; PID:933844
A; Residues: 1-420 c<sub>MUR></sub>
A; Cross-references: EMBL:X61176; NID:933843; PIDN:CAA43483.1; PID:933844
A; Accession: S21050
A; Molecule type: DNA
A; Residues: 1-395, 11 c<sub>MUR></sub>
A; Residues: 1-395, 11 c<sub>MUR></sub>
A; Residues: 1-395, 12 c<sub>MUR></sub>
A; Residues: 1-395, 13 c<sub>MUR></sub>
A; Residues: 1-332, 14 c<sub>MUR></sub>
A; Residues: 1-332, 15 c<sub>MUR</sub>
A; Residues: 1-332, 15 c<sub>MUR</sub>
A; Residues: 1-322, 15 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
                                                                                     interleukin-5 receptor alpha chain precursor (clone lambda h5R.12), membrane-anchored
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                      C; Species: Homo sapiens (man)
C; Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 01-Dec-2000
C; Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 01-Dec-2000
C; Accession: S21052; S21053; A46175; S78106; S78107
B; Murata, Y:, Takaki, S:, Migita, M.; Kikuchi, Y:; Tominaga, A.; Takatsu, K.
J. Exp. Med. 175, 341-351, 1992
A; Title: Molecular cloning and expression of the human interleukin 5 receptor.
A; Reference number: S21050; MUID: 92121815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A) Status: preliminary
A) Molecule type: mRNA
A) Residues: 333-420 crav>
A) Experimental source: HL-60 cells and eosinophils
A) Experimental source: HL-60 cells and eosinophils
B) Note: sequence extracted from NCBI backbone (NCBIN:116243, NCBIP:116244)
B) Murata; Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190 NGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTV 247
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Residues: 1128,/I/,130-395,/I/ <MUW>
:Cross-references: EMBL:X61177; NID:933839; PIDN:CAA43484.1; PID:933840
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.Murata, Y. submitted to the EMBL Data Library, September 1991 A; Reference number: S78107 A; Accession: S78107.
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submitted to the EMBL Data Library, July 1991
Kefference number: S78106
A; Accession: S78106
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Matches 102; Conserv
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Yamaguchi, N.; Takatsu
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C;Species: Mus musculus (house)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 20-Jun-2000
C;Accession: S12357
R;Takaki, S.; Tominaga, A.; Hitoshi, Y.; Mita, S.; Sonoda, E.; Yamaguchi, N.; T. EMBO J. 9, 4367-4374, 1990
A;Title: Molecular cloning and expression of the murine interleukin-5 receptor. A;Reference number: S12357, MUID:91092260
A;Accession: S12357
A;Accession: S12357
A;Accession: S12457
A;Accession: S12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : | : | | : | | : | | | 132 ITCTTNTTEDNYSRLRSYQVSLHCTWLVGTDAPEDTQYFLYYRYG--SWTEECQEYSKDT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          248 K-NSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE-IQITRISNESQKL 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EIEGTRISIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII----DDLSKY 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:M75914; NID:g186387; PIDN:AAA36110.1; PID:g186388
C;Keywords: cytokine receptor; transmembrane protein
                                                                                                                                                                                                                        CFLVRSKVNIYCSDDGIWSEMSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL 360
                                                                                                                                                                                                                                                                                       EIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISII---DDLSKY
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AACOSSION AA2050
A42050
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A42050
C;Species: Homo sapiens (man)
C;Accession: A42565; A46591; I54332
R;Takeshita, T:; Asao, H:; Ohtani, K.; Ishii, N.; Kumaki, S.; Tanaka, N.; Munakata, H.; Takeshita, T:; Asao, H:; Ohtani, K.; Ishii, N.; Kumaki, S.; Tanaka, N.; Munakata, H.; Attiel: Cloning of the gamma chain of the human IL-2 receptor.
A;Title: Cloning of the gamma chain of the human IL-2 receptor.
A;Accession: A42565
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid; protein
A;Residues: 1-369
A;Cross-references: GB:DI1086; NID:3303611; PIDN:BAA01857.1; PID:9219890
A;Experimental source: Moulf beta lymphoid cells
A;Cross-references: GB:DI1086; NID:330361; PiDN:AA01857.1; PID:9219890
A;Title: Characterization of the human interleukin-2 receptor gamma chain gene.
A;Accession: A46591
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Cross-references: GB:L12183; NID:937056; PIDN:AA59145.1; PID:g307058
A;Cross-references: GB:L12183; NID:937056; PIDN:AA59145.1; PID:g307058
A;Cross-references: GB:L12183; NID:937056; PIDN:AA59145.1; PID:g307058
A;Reference number: 154332; MUID:94004847
A;Reference number: 154332
A;Tttle: The interleukin-2 receptor gamma chain maps to Xq13.1 and is mutated in X-11
A;Reference number: 154332
A;Tttle: The interleukin-2 receptor gamma chain maps to Pelliminary; translated from GB/EMBL/DDBJ
A;Reference number: 154332
A;Tttle: The interleukin-2 receptor gamma chain maps to Pelliminary; translated from GB/EMBL/DDBJ
A;Tttle: The interleukin-2 receptor gamma chain maps to Pelliminary; translated from GB/EMBL/DDBJ
A;Tttle: The interleukin-2 receptor gamma chain maps to Pelliminary; translated from GB/EMBL/DDBJ
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A;Cross-references: GDB:134807; OMIM:308380
A;Cross-references: GDB:134807; OMIM:308380
A;Map position: Xq13.1-Yq13.1
A;Introns: 39/1; 90/2; 152/1; 198/3; 253/1; 285/2; 308/3
A;Introns: 39/1; 90/2; 152/1; 198/3; 253/1; 285/2; 308/3
A;Note: defects are associated with an X-1inked form of severe combined immunodeficie C;Superfamily: interleukin-2 receptor gamma chain
C;Keywords: cytokine receptor; duplication; immunodeficiency; severe combined immunod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                      322 VDVTXIVQPDPP--VNVTLELKKPINRKPYLVLTWSPPPLADVRSGWLTLE---YELRLK 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              266 LYSKEGEEQVYECPDY-RTAGPN-SCYFDKKHTSFWTIYNITVRATNEMGSNSSDPHY-- 321
                                        CTNGSEVRSSWAETTYWTSPQG-NRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQL 170
                                                                                                                                                                                    FYWYEGLDHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSE--SQPIRPSYFI 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --KIQDMDCVYYNWQYLVCSWKPGMGVHFD 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:L19546; NID:g349631; PIDN:AAC37524.1; PID:g349632
C;Genetics:
                                                                                                                                                                                                                                                                                                                                 229 FQLQNIVKPMPPDYLSLTVKNSEEIN-----LKWNMP-----KGPIPAKCFIYEIEF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TEDGTTWVTTTVENEIQITRTS-NESQKLCFLVRSKVNIYCSDD--GIWSEWSDEQCWK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  332 -GDIWKETLVFFLIPFAFVSIFVLVITCLLLYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431 PNDFRVKDMIVWIVLGVLSSLICLIMSWTMVLK 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 TTYWTSPQGNRET --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best_Local Similarity
Matches 65; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-369 <RE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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;439-462/Domain: transmembrane #status predicted <TMM>
;59,91,100,112,132,262,303,315,335,647,701,800/Binding site: carbohydrate (Asn) (covale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA
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A; Accession: J01655
A; Molecule type: mRNA
A; Residues: 1.831 crnA
A; Residues: 1.831 crnA
A; Cross_references: DDB::D13154; NID::9222848; PIDN::BAA02439.1; PID::9222849
A; Experimental source: Kidney
C; Superfamily: cytckine receptor homology
C; Superfamily: cytckine receptor homology
C; Superfamily: cytckine receptor homology
C; Superfamily: cytckine receptor factures predicted cytckine receptor homology cRs1>
F; 24-831/Pomain: cytckine receptor homology cRs1>
F; 39-425/Domain: cytckine receptor homology cRs2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Galius gallus (chicken)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 28-Jul-2000
C;Accession: JQ1655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127 YWTSPQGNRETKIQDMDCVYYN------WQY-LVCSWKPGMGVHFDTNYQLFYWYE 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :| |: | : | : | : | : | : | 115 L-KAPPGSPGTSVTNLTCTTHTVVSSHTHLRPYQVSLRCTWLVGKDAPEDTQYFLYYRFG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIVKPMPPDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEF--TEDGTTWVTTTVENE 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AIDOVNPPRNVTVEIE-SNSLYIQWEKPLSAFPDHCFNYELKIYNTKNGHIQKEKLIANK 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       291 IQITRISNESQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVS 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F-ISKIDDVS-TYSIQVRAAVSSPCRMPGRWGEWS-QPIYVGKERKSLVEWHLIVLPTAA 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTL------LPAQ 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DASSNHLYHYELRIKPEEKEEWETI------SVGVQTQCKINRLNAGMRYVVQVR 205
                                                                                                                                                                                                                                                                                                                                                                                                                                     EYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETT 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLDHSAECTDYIK-VNGKNMGCRFP--YLESSDYKDFYICVNGSSESQPIRPSYFIFQLQ 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                        8 VGFLYTLLVCTAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD-NFKECTI 66
A;Cross-references: GB:D90205; NID:g220465; PIDN:BAA14231.1; PID:g220466 C;Keywords: cytokine receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor deduced
                                                                                                                                                                                                                                                                                                                                                              9 VGALATLQ-----ADLLNHKKFLLLPPVNFTIKATG-LAQVLLHWDPN--PDQEQRHVDL
                                                                                                                                                                                                                      38;
                                                                                                                                                Length 415;
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Blochem. Blophys. Res. Commun. 188, 490.496, 1992
A;Title: Double antenna structure of chicken prolactin
A;Reference number: JQ1655; MUID:93075121
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                                                                                                                                        Query Match 12.5%; Score 266; DB 2; L. Best Local Similarity 25.7%; Pred. No. 8.6e-13; Matches 95; Conservative 71; Mismatches 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LVCTAFGSMLSNAEIKVNPPQDFE---IVDPG--
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Best Local Similarity 25.4
Matches 100; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||:| |:
348 CFVLLIFSLI 357
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RESULT A4009LI Interl C; Spec C; Date C; Date C; Action S; Itoh S; Itoh A; Tienc A; Refe A; Re	RESULT 7 A40031 Interleukin-3 receptor beta chain precursor - mouse C;Species: Mus musculus (house mouse) C;Species: Mus musculus (house mouse) C;Species: Mus musculus (house mouse) C;Accession: A40091, A43022 R;Itch, N.; Yonehara, S.; Schreurs, J.; Gorman, D.M.; Maruyama, K.; Ishii, A.; Yahara, I Science 247, 324-327, 1990 A;Tttle: Cloning of an interleukin-3 receptor gene: a member of a distinct receptor gene A;Refarence number: A40091; MUID:90117145 A;Scatus: nucleic acid sequence not shown A;Status: nucleic acid sequence not shown A;Molecule type: mRNA A;Readidues: 1878 <170> D;Corman D; M	204.1; PID:g309101 :lass of high-affinity IL-3 r kine receptor homology ane protein *status predicted <mat></mat>
A A A A A A A A A A A A A A A A A A A	Asubatited to GenBank, November 1989 A; Reference number: A4302 A; Accession: A4302 A; Accession: A4302 A; Molecule type: mRNA A; Molecule type: mRNA A; Residues: 1-815, 'Q', 817-878 <gor> A; Cross-references: GB:M29855; NID:g198342; PIDN:AAA39295.1; PID:g309406 C; Comment: In mice there are two classes of high-affinity IL-3 receptors. One contains treceptors.</gor>	Query Match 10.4%; Score 221; DB 1; Length 896; Best Local Similarity 22.6%; Pred. No. 6.1e-09; Matches 90; Conservative 64; Mismatches 153; Indels 92; Gaps 21; Qy 31 VNPPQDFEIVDEXTGYLSLQWQPPLFPDN
) O F F F F F F F F F F F F F F F F F F	C; Reportant; . incertainty a receptor; duplication; transmembrane protein F; 1-22/Domain: signal sequence *status predicted <sig> F; 23-878/Product: interleukin-3 receptor beta chain *status predicted <mat> F; 23-440/Domain: extracellular *status predicted <ext> F; 23-440/Domain: cytokine receptor homology <crs1> F; 24-433/Domain: cytokine receptor homology <crs1> F; 24-433/Domain: cytokine receptor homology <crs2> F; 441-462/Domain: transmembrane *status predicted <tmm> F; 441-462/Domain: transmembrane *status predicted <tmm></tmm></tmm></crs2></crs1></crs1></ext></mat></sig>	61FKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKI
O O O	tch al Similarity 24.5%; Score 221; DB 1; Length 878; al Similarity 24.5%; Pred. No. 6e-09; 86; Conservative 58; Mismatches 155; Indels 52; Ga	161 GVHFDTNYQLEYWYEGLDHSAECTDYIK-VNGKNMGCRFPYLESSDYKDFYICVNG :: : : : :
6 6 6 6	33 PPODFEIVDPGYLGYLGYLGYDPPLFPDNFKECTIEYELKYRNIDSENWKTIITKNLH 89 1 : : : : : : : : : : : :	F-KNRD KLCF : SPDTSY /ITCLL
oy og a	140 QDMDCVYVWQYLVCSMKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKVNGKNMG 195	Db 437 WKTDWVMPTLWILVFLILTLLILRFGCVSVYR 472 RESULT 9 Interleukin-3 receptor beta-subunit - rat C;Species: Rattus sp. (rat) C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 23-Jul-1999

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Interleukin-2 receptor gamma chain precursor - dog
C; Species: Canis lupus familiaris (dog)
C; Species: Canis lupus familiaris (dog)
C; Species: 18-aug-1995 #sequence_revision 18-aug-1995 #text_change 23-Jul-1999
C; Accession: A5518
R; Henthorn, P.S.; Somberg, R.L.; Fimiani, V.M.; Puck, J.M.; Patterson, D.F.; Felsburg
Genomics 23, 69-74, 1994
A; Title: IL-2Rgamma gene microdeletion demonstrates that canine X-linked severe combi
A; Reference number: A55718; MUID:95130114
A; Accession: A55718
A; Molecule type: mRNA
A; Residues: 1-373 <HEN>
A; Residues: GB:U04361; NID:9517411; PIDN:AAC48403.1; PID:9517412
C; Superfamily: interleukin-2 receptor gamma chain
C; Keywords: cytokine receptor; duplication
16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11;
                                                                                                                                                                                                                    NSSSEPR-PTNLTLHYWYKNSNDDKVQECGHYLFSREVTAGCWLQKEEIHLYETFVVQLR 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47 YLSLQWQPPLFPDNFKECTI-EYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKIN 105
                                                                                                                                                                                                                                                                                                                                                                                             372 YELRLKPEEAEEWETIFVGQQTHYKMFSLNPGKKYI-----VQIHCKPDHHGSWSEWSL 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104 INTLLPAQCTNGSE-----VRSSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSW 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       157 KPGMGVHFDTNYQLFYWYEGL--DHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVN 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   215 GSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIE 274
                                                                                                                106 TLLPAQCTNGSEVRSSWAETTYWTSPQG-NRETKIQDMDCVYYNWQYLVCSWKPGMGVHF 164
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                             3 INSTVP--MPNGNEDITPDFFLTATPSETLSVSS-----LPLPEVQCFVFNVEYMNCTW
                                                                                                                                                                                                                                                                                                 201 YVVQVRCVLDIGEWSEWSSERHIHIPNGESPPEKPTIIKCRSPEKETFTCWWKPGSDGGH
                                                                                                                                                                                             DTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVN----GSSES
                                                                                                                                                                                                                                                                           220 QPIRPSYFIFQLQNIVKPMPPDYLSL----TVKNSEEINLKWNMPKGPIPA-----KCFI
                                                                                                                                                                                                                                                                                                                                                        271 YEIEF-TEDGTTWVTTTVENEIQITRTS-NESQKLCFLVRSKVNIYCSDD--GIWSEWSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FTED-GTTWVTTTVENEIQITRTSNESQKL-CFLVRSKVNIYCSDDGIWSEWSDEQCWKG
  41;
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158;
                                                                                                                                                                                                                                                                                                                                                                                                                                    EQCWK -- GDIWKETLVFFLIPFAFVSIFVLVITCLLLYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DIWKETLVF----FLIPFAFVSIFVLVITCLLLYKQRAL 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          426 EKYLQIPTDFRIKDMVVWIIVGVLSSLICLVMSWTMVLK 464
  Mismatches
53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 25.18
Matches 70; Conservative
  Conservative
87;
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  Matches
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    prolactin receptor.
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C.Species: Columba livia (domestic pigeon)
C.Species: Columba livia (domestic pigeon)
C.Species: Columba livia (domestic pigeon)
C.Species: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 28-Jul-2000
C.Accession: 150455
B.Chen, X.; Horseman, N.D.
Endocrinology 135, 269-276, 1994
A.Title: Cloning, expression, and mutational analysis of the pigeon prolactin re
A.Reference number: 150455
A.Status: preliminary; translated from GB/EMBL/DDBJ
A.Molecule type: mRNA
A.Residues: 1-830 <CHED.
A.Residues: 1-830 <CHED.
A.CHED.
A.CTOSS.references: EMBL:U07694; NID:9466381; PIDN:AAA20646.1; PID:9466382
C.Superfamily: cytckine receptor homology
F:36-220/Domain: cytokine receptor homology <CRS1>
F:240-426/Domain: cytokine receptor homology <CRS2>
                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----TCNLWVTLEPKLFLPNSIYVARVRAQLAPGSSLSGRPSGWSPEVHWDSPTEDK-A 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               298 -- ELQASRYTRYHCSLN---VSDPAAHSQYTVSVKRLEQGKFIESFNHIQMNPPTLNLT- 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90 YKDGFDLNKGIEAKINTLLP-----AQCTNGSEVR---SSWAETTYWTSPQGNRET 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138 KIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCR 197
                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33 PPQDFEIVDPGYLGYLSLQWQPPLFPDN---FKECTIEYELKYRNIDSENWKTIITKNLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     198 FPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVK------PMPPDYLSLTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----CFLVRSKVNIYCSDDGIWSEWSDEQCWKGD----IW-KETLVFFLIPFAFVSIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LEPGTSYCARVRYTIPEYKGLWSEWSNECTWTTDWVMPTLWIVLILVFLILTFLLALRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248 KNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNESQKL----
                                                                                                                                                                                                                                                                                                                                                                                             73;
                                                                                                                                                                                                                                                                                                                                                        Length 896;
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                                                                                                                                                                                                                                                                                                                                                    10.2%; Score 218.5; DB 2; 22.0%; Pred. No. 9.5e-09; Live 60; Mismatches 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 217.5; DB Pred. No. 1e-08;
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25.7%;
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Best Local Similarity
Matches 81; Conserv
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Best Local Similarity
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projection receptor precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 30-59-1989 #sequence_revision 30-Sep-1989 #text_change 28-Jul-2000
C;Accession: A29884
R;Boutin, J.M.; Jolicoeur, C.; Okamura, H.; Gagnon, J.; Edery, M.; Shirota, M.; Banvi
Cell 53, 69-77, 1988
A;Tille: Cloning and expression of the rat prolactin receptor, a member of the growth A;Reference number: A29884; MUID:88165059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C:Species: Bos primigenius taurus (cattle)
C:Date: 16-Aug-1996 #sequence_revision 16-Aug-1996 #text_change 28-Jul-2000
C:Date: 16-Aug-1996 #sequence_revision 16-Aug-1996 #text_change 28-Jul-2000
C:Accession: 145971
R:Scott, P.; Kessler, M.A.; Schuler, L.A.
Roctt, P.; Kessler, M.A.; Schuler, L.A.
Mol. Cell. Endocrinol. 89, 47-58, 1992
A:Title: Molecular cloning of the bovine prolactin receptor and distribution of prola A:Reference number: 145971; MUID:93246019
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              ---IQDMDCVYYNWQYLVCSWKP 158
                                                                                                                                                                                                                                             77 SSEPQ-ATNLTLHYRYKVSDNNTFQECSHYLFSKEITSGCQIQKEDIQLYQTFVVQL--Q 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DPOKPORRAVOKLNLONLVIPRAPENLTLSNLSESQLELRWK--SRHIKERCLQYLVQYR 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNRDRSWTELIVNHEPRESLPSVDELKRYTFRVRSRYNPICGSSQQWSKWSQPVHWGSHT 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          154 CSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYLESSDYKDFYICV 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46 CWWEPGADGGLPTNYTLTYHKEGETLIHECPDY-KTGGPN-SCYFSKKHTSIWKMYVITV 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214 N-----GSSESQPIRPSYFIFQLQNIVKPMPPDYLSLTVKNSEE----INLKWNMP-KGP 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319 GIWSEWSDEQCWK------GDIWKETLVFFLIPFAFVSIFVL------VITCLL 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 LRAGWSSKVLMSS--ANEDIKADLILTSTAPEHLSAPTLPLPEVQCFVFNIEYMNCTWNS 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:L02549; NID:g163617; PIDN:AAA51417.1; PID:g163618 C;Genetics:
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                                                                                                                                                                                                                                                                                                                                                                    217 SESQPIRPSYFIFQLQNIVKPMPPDYLSLfVKNSEEINLKWNMPKGPIPAKCFIYEIEFT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: 145971
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-581 <SCO>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   335 WKETLVFF----LIPFAFVSIFVLVITCLLLY 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VRSSWAETTYWTSPOGNRETK
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Best Local Similarity
Matches 71; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
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A; Rosidues: 1-369 <a href="https://www.ncbs.edu/">www.ncbs.edu/</a>
A; Rosidues: 1-369 <a href="https://www.ncbs.edu/">www.ncbs.edu/</a>
A; Cross -references: GB: D13821; NID: 9436045; PIDN: BAA02974.1; PID: 9436046
B; Chiu, R. K.; Dougherty, G.J.
R; Chiu, R. K.; Dougherty, G.J.
A; Description: Regulation of CD44 mediated cellular adhesion by the IL-2 R gamma chain.
A; Roference number: S37882
A; Rocession: S37882
A; Rocession: S37882
A; Rottus: preliminary
A; Molecule type: mRNA
A; Rosidues: 1-350, S', 332-366, S', 368-369 <CHI>A; Rosidues: 1-350, S', 332-366, S', 368-369 <CHI>A; Cross-references: BMBL: X75337
A; Cross-references: BMBL: X75337
B; D15anto, J. P.; Certain, S.; Wilson, A.; MacDonald, H.R.; Avner, P.; Fischer, A.; de Sa Buttie: The murine interleukin-2 receptor gamma chain gene: organization, chromosomal 1
A; Roference number: I53398; WUID: 95104285
A; Accession: I53399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Casa-references: CB:L20048; NID:g404067; PIDN:AAA39286.1; PID:g404068
R; Kumaki, S.; Kondo, M.; Takeshita, T.; Asao, H.; Nakamura, M.; Sugamura, K.
Bicchem. Blophya. Res. Commun. 193, 356-363, 1993
A; Title: Cloning of the mouse interleukin 2 receptor gamma chain: Demonstration of funct A; Reference number: JN0592; MUID:93277575
A; Accession: JN0592
A; Status: nucleic acid sequence not shown
A; Residues: 1-369 < KNNA
A; Residues: 1-369 < KNNA
A; Residues: 1-369 < KNNA
A; Residues: Sinning Sinni
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A pathway: Interleukin-2 stimulated growth and differentiation of T cells, B cells, NK C
Superfamily: interleukin-2 receptor gamma chain
C; Superfamily: interleukin-2 receptor gamma chain
C; Kaywords: cytokine receptor; duplication; glycoprotein; transmembrane protein
C; Kaywords: cytokine receptor; duplication; glycoprotein; transmembrane protein
F; 1-23/Domain: signal sequence *status predicted <SIG>
F; 23-36/Product: interleukin-2 receptor gamma chain *status predicted <MAM>
F; 256-284/Domain: transmembrane *status predicted <TMM>
F; 256-284/Domain: transmembrane *status gredicted <TMM>
F; 71, 75, 84, 96, 159, 164, 306/Binding site: carbohydrate (Asn) (covalent) *status predicted
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A;Introns: 39/1; 90/2; 152/1; 199/3; 254/1; 286/2; 308/3
C;Complex: The high affinity receptor is a heterotrimer of alpha (see PIR:UHMS2), beta
                            C; Species: Mus musculus (house mouse)
C; Species: Mus musculus (house mouse)
C; Date: 27-Feb-1997 #sequence_revision 27-Feb-1997 #text_change 20-Jun-2000
C; Date: 27-Feb-1997 #sequence_revision 27-Feb-1997 #text_change 20-Jun-2000
C; Date: 27-Feb-1997 #sequence_revision 27-Feb-1997 #text_change 20-Jun-2000
C; Date: 27-Feb-1997 #sequence_revision 27-Feb-1997
B; Caces 10. X.; Kozak, C.A.; Liu, Y.
Proc. Natl. Acad. Sci. U.S.A. 90, 8464-8468, 1993
A; Title: Characterization of cDNAs encoding the murine interleukin 2 receptor (IL-2R)
A; Reference number: A47514; MUID:93391374
A; Reference number: A47514; MUID:93391374
A; Reference number: DNA
A; Residues: 1-369 <CAO>
A; Residues: 1-369 <CAO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Cloning and sequencing of the cDNA encoding a mouse IL-2 receptor gamma.
A;Reference number: JN0775; MUID:93366191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:U21795; NID:g727349; PIDN:AAA64279.1; PID:g727350
A;Accession: A47514
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interleukin-2 receptor gamma chain precursor - mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: translated from GB/EMBL/DDBJ
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Best Local Similarity
Matches 64; Conserv
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A; Residues: 1-369 <RE2>
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10;

Gaps

38;

64; Conservative

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Search completed: September 20, 2002, 11:53:46 Job time: 135 sec
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prolactin receptor Nb2 precursor - rat
C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: 12-0un-1992 #sequence_revision 12-Jun-1992 #text_change 28-Jul-2000
C; Accession: A41070; 155417
R; Ali, S.; Pellegrini, I.; Kelly, P.A.
J. Biol. Chem. 266, 20110-20117, 1991
A; Title: A prolactin-dependent immune cell line (Nb2) expresses a mutant form of prolact
A; Reference number: A41070; MUID:92041834
A; Molecule type: mRNA
A; Residues: 1-412 AALI>
A; CALI>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130 SPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKV 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245 LTVKNSEE----INLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVE-----NEIQ 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130 SPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKV 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NGKNMGCRFPYLESSDYKDFYICVN----GSSESQPIRPSYFIFQLQNIVKPMPPDYLS 244
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                                             A Molecule type: mRNA

**Residues: 1-310 < SBOD**

**Residues: 1-310 < SBOD**

**A: Cross-references: GB:M19304; NID:g206364; PIDN:AAA41937.1; PID:g206365

C; Superfamily: Cytokine receptor homology

C; Seywords: transmembrane protein

F; 1-19/Domain: signal sequence **status predicted <SIG>*
F; 20-310/Product: prolactin receptor **status predicted <MAT>*
F; 31-216/Domain: Cytokine receptor homology <CRS>*

**CRS**

**CRS*

**CRS**

**CRS*

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A; Accession: A29884
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190 NGKNMGCRFPYLESSDYKDFYICVN-----GSSESQPIRPSYFIFQLQNIVKPMPPDYLS 244
                                                                                                   245 LTVKNSEE----INLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVE-----NEIQ
                                                                                                                                                                                                    293 ITRTSNESQKLCF-----LVRSKVNIYCSDDGIWSEWSDEQC--WKGDI-WKETLVF
                                                                                                                                                                                                                                                                                                           342 FLIPFAFVSIFVLVITCLLLYKQRALLKTIF 372
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2132
1 MAFIHLDVGFLYTLLVCTAF......LLKTIFHTKKEVFSHQDTFC 386
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Copyright (c) 1993 - 2000 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

14: 115: 116: 118: 20: 22:

SUMMARIES

	Description	Canine interleukin	Canine interleukin	Canine IL-13R extr	Canine IL-13Ralpha	Canine IL-13Ralpha	Canine IL-13Ralpha	Canine IL-13Ralpha	Human interleukin-	Human IL-13 bindin	Human Zcytor2 cyto	Human HR-1 recepto
	ID	. 7	AAU69136	AAU69137	AAU69138	AAU69141	AAU69140	AAU69139	AAW24972	AAW35295	AAW36613	AAW41520
	0.18	22	22	22	22	22	22	22	18	18	18	19
	Query Match Length DB	386	365	318	561	561	563	565	380	380	380	380
ФÞ	Query Match	100.0	94.8	83.3	83.3	83.3	83.3	83.3	70.5	70.5	70.5	70.5
	Score	2132	2021	1775	1775	1775	1775	1775	1503	1503	1503	1503
	Result No.	1	7	٣	4	S	9	7	œ	6	10	11

Novel isolated canine protein, preferably canine immunoglobulin G

XX PT

Human cytokine/pep Homo sapiens HR-1 IL-13 binding chai Amino acid sequenc Human interleukin Human IL-13 recept Human Zcytor2 cyto	Canine interleukin Mature interleukin Construct containi Murine IL-13 bindi IL-13 binding chai Murine interleukin Mouse IL-13 recept Canine interleukin Mouse interleukin	Human interleukin- Interleukin-13 bin Human interleukin- Human interleukin- Human interleukin- Sequence of human Human IL-5 recepto Sequence of secret Sequence of secret Sequence of secret Canine interleukin-	Sequence of human IL-13/IL-4 dual tr Protein used in pr Soluble human IL-5 shIL-5R-alpha. Sy IL5-R-GBP 130 fusi
AAW41502 AAW33603 AAY35296 AAG63812 AAY72136 AAB29748 AAW36614	AANG 913 AANG 521 AAWS 626 AAWS 294 AAYS 295 AAY 72135 AAB 29747 AANG 9913	AAW09822 AAW24973 AAB19807 AAB19808 AAR22216 AAR22220 AAR22220 AAR222220 AAW82842	AAR22215 AAY92208 AAW21856 AAR25063 AAR33699 AAR70121
122221	122 122 123 133 133 134 135 136	118 113 113 113 113 125 127 127	13 14 16
380 380 380 380 380	272 255 315 383 383 426	426 157 427 427 427 396 421 396 420 420	420 793 313 335 1026
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1503 1503 1503 1503 1503 1503 1473	1477 1392.5 1392.5 1271.5 1271.5 1271.5 1271.5 1271.5	329 320 318.5 318.5 316.5 314 312.5 312.5 312.5 312.5	304.5 304.5 301 298 298 298
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protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds
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                                                                                                                                                                                                                                                                                  Score 2132; DB 22; Length 386; Pred. No. 3e-198; 0; Mismatches 0; Indels 0;
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                                      20; Page 176-177; 221pp; English.
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Best Local Similarity 100.
Matches 386; Conservative
                                                                                                                                                                                                                                            386 AA;
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immune response of an animal and for developing regulatory compounds
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94.8%; Score 2021; DB 22;
Best Local Similarity 100.0%; Pred. No. 1.6e-187;
Matches 365; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 20; Page 181-183; 221pp; English.
                                                      09-APR-2001; 2001WO-US11498
                                                                                                               2000US-195659P
                                                                                                                                          07-APR-2000; 2000US-195874P
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N-PSDB; AAS59966.
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                                                                                                                                                                                                      (HESK-) HESKA CORP
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18-OCT-2001
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42 gpipakcfiyeieftedgttwvtttveneigitrtsnesgklcflvrskvniycsddgiw 301
                    GPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRISNESQKLCFLVRSKVNIYCSDDGIW 321
                                                                                                                                                                                                     AAU69138 standard; Protein; 561 AA.
                                                                                     SEWSDEQCWKGDIWKET 338
                                                                                                     302 sewsdegcwkgdiwket 318
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel isolated canine protein, preferably canine immunoglobulin G
protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds
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                                                                                                                               Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; immunosuppressive; gene therapy;
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                                                                                                 Canine IL-13R extracellular domain PcaIL-13Ralpha2 318.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 20; Page 185-187; 221pp; English.
   ¥.
AAU69137 standard; Protein; 318
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                                                                (first entry)
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Best Local Similarity 100.
Matches 317; Conservative
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                                                                29-JAN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel isolated canine protein, preferably canine immunoglobulin {\tt G} protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence represents a protein of the invention.
                                                                                                                            Canine IL-13Ralpha2/IgG-Fc fusion protein PcaIL-13Ralpha2-Fc-3523 561
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                                                                                                                                                                                    Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralphal; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; immunosuppressive; gene therapy;
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Pred. No. 2.3e-163;
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100.0%; Pred. No. ...
... 0; Mismatches
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2000US-195874P.
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                                                           29-JAN-2002 (first entry)
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Best Local Similarity
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N-PSDB; AAS59970.
                                                                                                                                                                                                                                                                                          immune response.
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07-APR-2000;
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AAU69138;
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the invention.

The present sequence represents a protein of

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel isolated canine protein, preferably canine immunoglobulin G
protein or canine interleukin-13 receptor protein useful for regulating
immune response of an animal and for developing regulatory compounds
          TIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRSSWAETTYWTSPQGNRETKIQD 141
                                                         201
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                      242 gpipakcfiyeieftedgttwvtttveneigitrtsnesgklcflvrskvniycsddgiw 301
                                                                                                                                                                                                                                                                                                                                                                                 Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                                                                                                                          Canine IL-13Ralpha2/IgG-Fc fusion protein PcaIL-13Ralpha2-Fc-B9 561.
                                                                                                    202 ESSDYKDFYICVNGSSESOPIRPSYFIFQLQNIVKPMPPDYLSLTVKNSEINLKWNMPK
                                                                    142 MDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYL
                                                                                                                                                   262 GPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNESQKLCFLVRSKVNIYCSDDGIW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 46; Page 210-212; 221pp; English.
                                                                                                                                                                                                                                                                                    AAU69141 standard; Protein; 561 AA.
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Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNESQKLCFLVRSKVNIYCSDDGIW 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                  22 SMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDNFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2; IL-13Ralpha1; IR-13Ralpha2; Immunoglobulin heavy chain; IgG Fc; immunoglobulin light chain; lambda; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Canine IL-13Ralpha2/IgG-Fc fusion protein PcaIL-13Ralpha2-Fc-B9 563.
                                                                                                                                                                           MDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYL
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                                                                 Length
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                                                                                   2.3e-163;
                                                                 Score 1775; DB 22;
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0
                                                                                   100.0%; Pred. No. 2.3 ive 0; Mismatches
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                                                                 83.3%;
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                                                             Query Match 83.3
Best Local Similarity 100.
Matches 317; Conservative
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561 AA;
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       Immunoglobulin G (1909) protein or canine process, presently restricted to the nucleic acids encoding them, antibodies raised against them, tusion proteins between the 19G and IL-13) raised against them, tusion proteins between the 19G and IL-13R proteins and methods of isolating regulators of them. The regulators are useful to for regulating an immune response in a canine. The proteins useful to when administered to a canine in an effective manner, are capable protecting canine from disease mediated by II-13Ralpha or IL-13. The regulators are useful for treating canine 19G (heavy and/or light chain) and/or ranine IL-13R mediated response. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence represents a protein of the invention.
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 invention concerns an isolated canine protein, preferably canine
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immunoglobulin light chain; lambda; immunosuppressive; gene therapy;
                                                                                                                                                                                                                                                22 SMLSNAEIKVNPPQDFEIVDPGYLGYLGLQWQPPLFPDNFKECTIEYELKYRNIDSENWK 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dog; interleukin-13 receptor alphal; interleukin-13 receptor alpha2;
                                                                                                                                                                                                                                                              MDCVYYNWQYLVCSWKPGMGVHFDINYQLFYWYEGLDHSAECTDYIKVNGKNMGCRFPYL
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                                                                                                                                                                                                83.3%; Score 1775; DB 22; Length 563; 100.0%; Pred. No. 2.3e-163; 1ve 0; Mismatches 0; Indels 0;
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Matches 317; Conservative
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                                                                                                                                                               563 AA;
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The invention concerns an isolated canine protein, preferably canine immunoglobulin G (IgG) protein or canine interleukin-13 (IL-13) receptor protein, the nucleic acids encoding them, antibodies raised against them, tusion proteins between the IgG and IL-13R proteins and methods of isolating regulators of them. The regulators are useful for regulating an immune response in a canine. The proteins useful to develop regulatory compounds including inhibitors and activators that, when administered to a canine in an effective manner, are capable of protecting canine from disease mediated by IL-13Ralpha or IL-13. The regulators are useful for treating canine IgG (heavy and/or light chain) and/or canine IL-13R mediated responses. The molecules of the invention are useful to regulate the immune response of an animal (e.g. by gene therapy). The present sequence represents a protein of the invention.
                                                                                                                Novel isolated canine protein, preferably canine immunoglobulin G protein or canine interleukin-13 receptor protein useful for regulating immune response of an animal and for developing regulatory compounds -
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100.0%; Pred. No. 2.3e-163;
ive 0; Mismatches 0;
                                                                                                                                                                                                                    Claim 46; Page 197-199; 221pp; English.
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                                           WPI; 2001-657172/75
Tang L;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 565 AA;
                                                                       N-PSDB; AAS59972
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McCall CA,
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                                                                                                                                                                                                                                                                                                           This sequence represents interleukin-13 (IL-13) beta receptor. The invention relates to new purified peptides comprising 380 or 427 amino acid asquences, which are receptors for interleukin-13 (IL-13); the 380 and 427 aa proteins are designated IL-13R beta and alpha respectively. The IL-13R beta has high affinity for IL-13R beta and alpha respectively. The IL-13R beta has high affinity when associated with the IL-4 receptor. Nucleic acids encoding IL-13R beta and alpha are used as diagnostic probes to identify aberrangements, or chromosomal anomalies. They are also used for production of recombinant IL-13R beta and alpha which can be used as IL-13 antagonists, specifically to regulate IL-13. Induced responses for treatment of inflammation and allergy. Il-13 receptors are also useful as antisense molecules for therapy (blocking synthesis of IL-13R). Antibodies are used (in standard immunosasaya) to diagnose diseases associated with abnormal expression of IL-13R receptors; when coupled to a toxin also for treatment of coverproduction of IL-13R. Cells that express IL-13R at the surface are used to identify ligands and modulators of IL-13R at the surface are used to identify ligands and modulators of IL-13R. Shown in the specification (AAT8664), which is not the same as that shown in the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDH 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                    New purified human interleukin-13 receptors - and related nucleic acids, useful for diagnosis and treatment of inflammation, allergy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNE
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                                                                                                                                        Vita N;
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                                                                                                                                        ď
                                                                                                                                         Laurent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence listing (AAT85828).
                                         96WO-FR01756
                                                                         95FR-0014424
                                                                                                                                                                                      N-PSDB; AAT85826, AAT86464.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 272; Conservative
                                                                                                                                         Ferrara P,
                                                                                                                                                                      WPI; 1997-319773/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                        (SNFI ) SANOFI SA.
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                                         07-NOV-1996;
                                                                         06-DEC-1995;
           12-JUN-1997
                                                                                                                                        Caput D,
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chain of the interletion to the interletion of the interletion of the component of the known biological activities of IL-13 Recombinant IL-13bc proteins, and antibodies raised against them, are used to inhibit the binding of IL-13 to its receptor. They are particularly used to treat IgB-mediated conditions, e.g. allergy, asthma and immune complex disorders, especially lupus, nephritis, thyroiditis and frave's disease. They are also used to treat immune deficiency (particularly in haematopoietic progenitor cells), cancer etc., and to increase macrophage activation, e.g. in vaccination. To potentiate IL-13 activity, a protein with such activity is combined with IL-13bc and the mixture applied, other than IL-13bc IL-13bc and so the IL-13 receptor other than IL-13bc IL-13bc can also be used in diagnosis to detect expression of IL-13, its receptor or binding chain, and to raise specific antibodies which may be useful for treating some tumours.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Interleukin-13; IL-13; interleukin-13 receptor binding chain; IL-13bc; mediator; IL-13 receptor binding inhibition; IgE-mediated condition; allergy; asthma; immune complex disorder.
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                                                                                                                                                                                                                                                                                                                                                                                                                               Human IL-13 binding chain of the IL-13 receptor.
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/label= extracellular_domain
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/label- transmembrane_domain
363..380
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/label= signal_sequence
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                                                                                                                                                                                                                         AAW35295 standard; Protein; 380 AA.
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359 LLLYKQRALLKTI 371
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This sequence represents a novel ligand-binding receptor, Zcytor2,
which shares homology with cytokine receptors and was isolated from human
complete plants of placental polyhether and a receptor for
cytokines (particularly interleukin-13) and is expressed on the surface
cytokines (particularly interleukin-13) and is expressed on the surface
cof testicular cells, probably being involved in spermatogenesis. It can
be used to detect ligands that promote proliferation and/or
differentiation of such cells in cultures and may also be used to treat
infertility. Antagonists of this receptor may be used to characterise
ligand-receptor interactions and as male-specific contraceptives. By
colocking the action of IL-13, receptor may be used to characterise
this receptor can also be used to modulate immune function, e.g. in
allergy and asthma, as a diagnostic to determine circulating levels of
ilgand and also to isolate and purify ligands. Antibodies can be used to
assay circulating receptor (an abnormal level may be indicative of
disease such as cancer), for labelling cells that express the receptor,
and therapeutically as antagonist.
                      New nucleic acid encoding testis-specific cytokine receptor - useful for identification of ligands or antagonists, potentially for use as male contraceptives or for infertility treatment
                                                                        Claim 2; Page 47-48; 79pp; English.
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nes 272; Conserv
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N-PSDB; AAT96782.
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                                                             Gaps
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                                                                                                   1 MAFIHLDVGFLYTLLVCTAFG-SMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD
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                                   70.5%; Score 1503; DB 18; 72.9%; Pred. No. 3.3e-137; ive 42; Mismatches 57;
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/label- ligand_binding_domain
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/label= transmembrane_domain
364..380
/label= intracellular_domain
25..339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human Zcytor2 cytokine receptor protein.
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                                               Local Similarity 72.9 ies 272; Conservative
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380 AA
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Best Local Si
Matches 272;
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 Sequence
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                                                 Gaps
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                                                5,
               Length 380;
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haematopoietic disorder; tumour; therapy; diagnosis.
                                                 Indels
70.5%; Score 1503; DB 18; 72.9%; Pred. No. 3.3e-137; wiematches 57;
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(HUMA-) HUMAN GENOME SCI INC. (SMIK ) SMITHKLINE BEECHAM CORP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                        This protein comprises a novel human cytokine/peptide hormone receptor, designated the HR-1 receptor, that shows 27% identity and 5% similarity to the interleukin-5 receptor. Its amino acid sequence was deduced from a cDNA clone (see AAV04131) obtained from a human testis library. Recombinant HR-1 receptor can be expressed in claimed host cells, and used in a claimed method for identifying compounds which bind to, and activate or inhibit, it. HR-1 receptor activators and agonists can be used to treat, prevent or diagnose predisposition to lowered resistance to infection, asthma, allergic or haematopoietic disorders, e.g. where induced by AIDS, aplastic anaemia, neutropaenia or cytotoxic treatments for cancer. HR-1 antagonists, e.g. antibodies or HR-1 receptor fragments, can be used to treat conditions associated with HR-1 receptor.

C overexpression. The antibodies can also be used to determine HR-1 receptor levels, since overexpression may be diagnostic of tumours.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNE 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDH 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                      Nucleic acid sequence encoding human cytokine peptide hormone raceptor - useful to treat, prevent or diagnose, e.g. lowered resistance to infection, asthma, allergy or haematopoietic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMP
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                                                    /label~ Sig_peptide
22..380
/label~ Mat_protein
                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 13; Page 62-64; 76pp; English
                           Location/Qualifiers
                                                                                                                                                                                                                                      HUMAN GENOME SCI INC.
SMITHKLINE BEECHAM CORP.
                                                                                                                                                                            96WO-US10262
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                                                                                                                                                                                                                                                                                  Appelbaum ER, Hu J;
                                                                                                                                                                                                                                                                                                              WPI; 1998-052308/05.
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Homo sapiens
                                                                                                                  WO9747741-A1
                                                                                                                                                                                                          12-JUN-1996;
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Best Local Simi
Matches 272;
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                                         Peptide
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This protein comprises a novel human cytokine/peptide hormone receptor, designated HR-1 receptor. The amino acid sequence was deduced from a CDNA clone (see AAVO4075) isolated from a human testis cDNA library. It shows 2/8 amino acid identity and 52% similarity with the human interleukin-5 receptor. Also claimed are polynomicotides encoding HR-1 receptor, vector and host cells, an agonist to the polypeptide, antibody against the polypeptide, an antagonist that inhibits the activity of the polypeptide, an antagonist that inhibits the activity of the polypeptide, a process of a susceptibility to disease, related to expression of HR-1 receptor, and a method for identifying compounds that activate or inhibit the HR-1 receptor. HR-1 receptor protein and polynucleotides can be used for research, biological, diagnosis and (gene) therapy applications, e.g. to increase resistance to infections in individuals with trauma and/or burns, and to prevent, amellorate, treat, diagnose and/or determine predisposition to asthma, allerage disorders or disorders of haematopoiesis induced by AIDS, aplastic anaemia, congenital or cyclic neutropaenia or as a consequence of cytotoxic therapy of
SQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKG-DIWKETLVFFLIPFAFVSIFVLVITC 358
                                                   Human cytokine/peptide hormone receptor, HR-1 receptor - useful to increase resistance to infections in individuals with trauma and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HR-1 receptor; cytokine receptor; peptide hormone receptor; human; infection; burn; trauma; asthma; allergy; AIDS; aplastic anaemia; neutropaenia; therapy.
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22..380
/label= Mat_protein
/note= "Claim 14"
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WPI; 1998-052309/05.
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                                                            Gaps
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                                                                            1 MAFIHLDVGFLYTLLVCTAFG-SMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPD
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cancer, lymphoma, leukaemia and/or bone marrow transplantation.
                                                                                                                                                                                                                                                                                                                                                                                                                          Cytokine; hormone receptor; AIDS; acquired immune deficiency; syndrome; aplastic anaemia; neutropaenia; cancer treatment; infection resistance; diagnosis; tumours; HR-1 receptor;
                                          Length 380;
                                                           Indels
                                         Score 1503; DB 19;
Pred. No. 3.3e-137;
42; Mismatches 57;
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                                         Query Match 70.5%;
Best Local Similarity 72.9%;
Matches 272; Conservative 4
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12-JUN-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKG-DIWKETLVFFLIPFAFVSIFVLVITC 358
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      for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDH
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DNA encoding human cytokine-peptide hormone receptor - useful treating preventing or diagnosing, e.g. lowered resistance to infection, asthma, allergy, or haematopoietic disease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70.5%; Score 1503; DB 19; 72.9%; Pred. No. 3.3e-137; iive 42; Mismatches 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IL-13 binding chain of human IL-13 receptor.
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                                                                                                                                  Claim 15; Fig 1; 75pp; English.
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Matches 272; Conservative
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Homo saptens.

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New polynuclaotide encoding an interleukin-13 (IL-13) binding chain of an IL-13 receptor for treating IGE-mediated conditions, such as atopy, asthma, Grave's disease and inflammatory conditions of the lung -
                                                                                                                           /note- "intracellular domain; a polypeptide comprising amino acids 257-383 is specifically claimed in Claim 11(f)"
                                                                         /note- "extracellular domain; a polypeptide comprising amino acids 22-334 is specifically claimed in Claim 11(e)"
                                                                                                  342..362
/note= "transmembrane domain"
363..380
                                        'note- "signal peptide"
                                                26..380
/note= "mature protein"
                                                                                                                                                                                                                                                                                                                                          Claim 11(d); Page 53-54; 60pp; English.
                        Socation/Qualifiers
                                                                                                                                                                                                                                                          Donaldson D, Fitz L,
                                                                                                                                                                                               99WO-US29493
                                                                                                                                                                                                                98US-0211335
                                                                                                                                                                                                                               (GEMY ) GENETICS INST INC. (UYJO ) UNIV JOHNS HOPKINS
                                                                 26..341
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N-PSDB; AAA27912.
                                                                                                                                                            WO200036103-A1.
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                                                                                                                                                                                                                                                         Collins M,
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                                Peptide
                                                 Protein
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Domain
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Neben T, Whitters MJ, Wood C;

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The present sequence is that of the interleukin-13 binding chain (IL-13bc) of the human IL-13 receptor, as deduced from an isolated thuman testis cDNA clone (see AAA7912). IL-13bc is a member of the human testis cDNA clone (see AAA7912). IL-13bc is a member of the heamatopoietin receptor family that acts as a mediator of IL-13. The invention provides methods for the recombinant of IL-13bc polypeptides, including claimed full-length IL-13bc, its extracellular domain, and its intracellular domain. IL-13bc polypeptides, particularly soluble IL-13bc polypeptides, and IL-13b modits receptor inhibitors (e.g. antagonists of the interaction of IL-13 and its receptor) can be used to treat conditions and und IL-13 is implicated, particularly information of its receptor) as thus, immune complex diseases including atopy, allergy, asthma, immune complex diseases (e.g. Iupus, nephrotic syndrome, impuner complex diseases) thyroiditis and Grave's disease), lung inflammation, impunediciency, and cancer. Since IL-13 inhibits macrophage activation, IL-13bc proteins can also be used to enhance macrophage activation, e.g. in vaccination, treatment of mycobacterial or intracellular organisms or parasite infections. IL-13bc proteins in vivo, as diagnostic agents, and to screen for agents capable of binding of IL-13 to its receptor. or which interfere with the
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Claim 3; Fig 1; 66pp; English.
                                                                                        response against the subunit
WPI; 2001-522435/57.
N-PSDB; AAH74791.
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                                                                                                                                                                                         ; Score 1503; DB 21;
; Pred. No. 3.3e-137;
42; Mismatches 57;
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72.9%;
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Best Local Similarity 72.99
Matches 272; Conservative
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The present sequence represents a human interleukin-13 receptor subunit alpha 2 (IL-13Ralpha2), which is a cancer/testis antigen. The specification describes a method for stimulating immune response against IL-13Ralpha2 subunit. The method is used for stimulating immune response against IL-13Ralpha2 in a human being having or at risk of developing a cancer having gliona cells expressing IL-13Ralpha2. The polypeptides and polynuclectides are useful for preventing and/or treating cancers e.g., high grade gliomas (HGG).
                                                                                                                 301 trqlcfvvrskvniycsddgjwsewsdkqcwegedlskktllrfwlpfgfillilvifvtg 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             interleukin-13 receptor subunit alpha 2; IL-13Ralpha2; cancer; antigen; immune response; glioma cell.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stimulating immune response against interleukin-13 receptor alpha2 subunit in a subject having or at risk of developing gliomas, invoiformulating a vaccine comprising an agent that stimulates immune
                                                        NFKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVR
                                                                                                   SSWAETTYWISPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDH
                                                                                                                                                                                                                     PDYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNE
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